

The CHILDREN'S NEWSPAPER

AND CHILDREN'S PICTORIAL

The Story of the World Today for the Men and Women of Tomorrow

Number 242

Week Ending
NOVEMBER 3, 1923

EDITED BY ARTHUR MEE

Postage Anywhere
One Halfpenny

Every Thursday 2d.

INTO THE TEETH OF THE STORM

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BIG HOLE SWALLOWS A FARM

REMARKABLE HAPPEN- INGS IN LANCASHIRE

Surface of the Earth Gives
Way in a Village

IMMENSE CRATER

The writer went recently to see the field in which, as a boy, he played cricket on the pitch where all the village matches were played; and he found that the exact place where the wickets were driven in was a rugged hollow, and that "point" would now have to stand on a bank, and "short-leg" would lurk in a sudden dip. Cricket will never be played there again.

The field has been undermined for coal, and the cricket pitch, dear to memory, was crinkled into miniature hills and dales by the slow subsidence.

Some strange changes occur on the Earth's friendly face through the mole-like borings of men far underneath; and among the strangest of these changes are those that come where salt has been drawn copiously from the earth by brine-pumping. This is now being seen in a striking way in Lancashire, at Preesall, near Preston.

An Orchard Disappears

There it is calculated that in the past 270,000 tons of brine and rock-salt have been brought up from far underground. Something, of course, must take its place; and what is happening is that a deep crater has been formed where the brine-pumping machinery was, and is now about 200 feet across.

It began with a hole about four yards wide into which the turf and earth round kept tumbling down and down, how far no one knew. And gradually the hole widened, swallowing down its edges. Close by was an orchard, a private road, and a little farm-house.

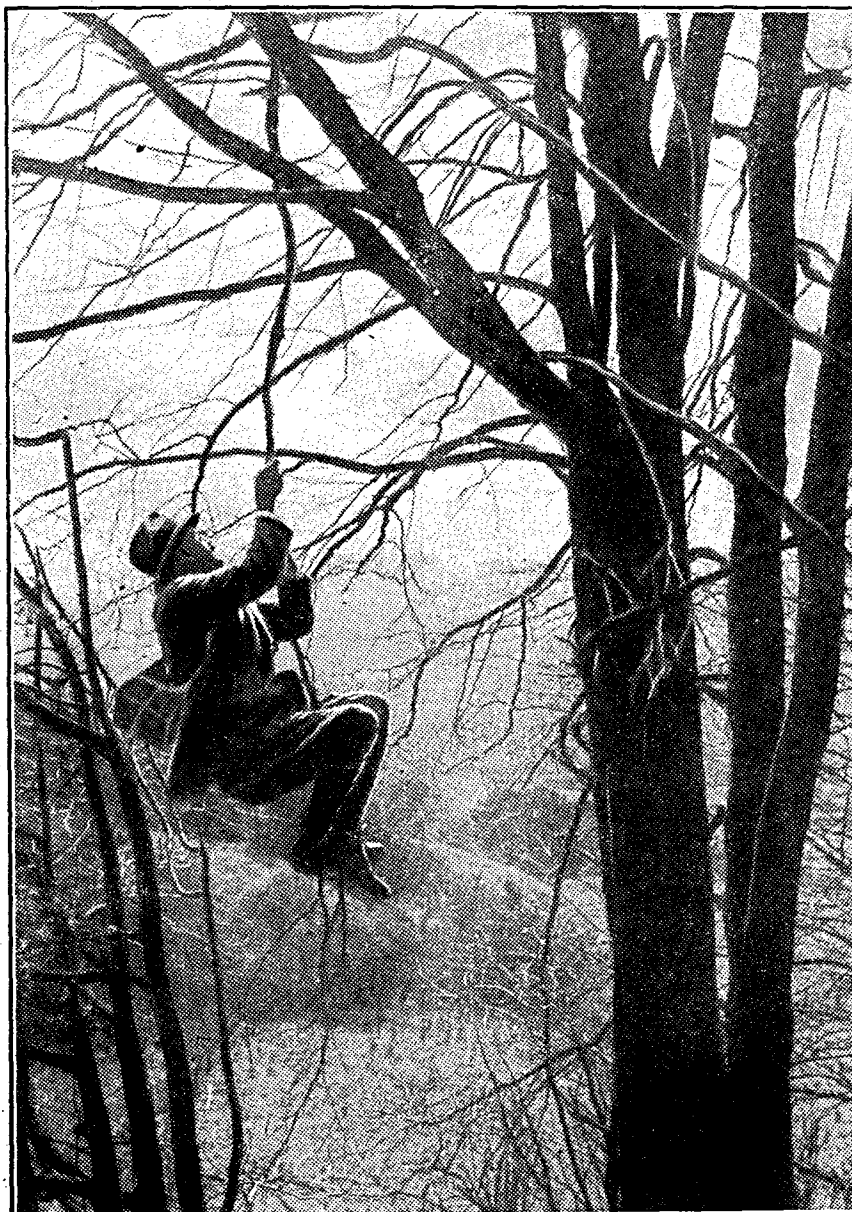
Now half the orchard has disappeared into the widening and deepening crater, and part of the road. Some of the farm buildings have slipped down into its devouring mouth, and the house itself is threatened, so that the people who belong to it do not stay in it at night, but come in the morning to see if it is there.

Distant Rumbles

How deep the crater is no one knows, but they say it is likely to be 800 feet, for that was the depth of the brine-pumping shafts.

No doubt it will fill up in time, for deep rumbles like distant thunder are heard as the sides below keep falling in. Rumbles have been heard as far as four miles away. People come from far to see and hear the great Preesall subsidence, and the children of today will pass on to their children's children the tale of how the brine-pumping shaft fell in and made everybody stand far back behind danger boards, while the earth slowly filled up solid where the brine and rock-salt had been.

The Picture Man in the Tree-Tops



Captain Knight, who has taken some wonderful film pictures of bird life in the tree-tops, climbing to the top of a tree with his camera. See page 4

DUSTBINS RUN THE MOTOR LORRIES

EVERYWHERE waste is more and more being used as a source of wealth, and the new refuse disposal works of the Sheffield Corporation are the last word in making use of the apparently useless.

The refuse of the dustbins arrives at the works at the rate of about 500 tons a day, and this first of all passes over screens, which sort out the dust, fine cinders and coarse cinders, and discharge the remainder of the rubbish on to a moving belt.

As this moves along sorters pick out such things as rags, bones, paper, tins, and so on, and these are dealt with in separate departments.

The dust serves as a valuable substitute for stable manure, now so scarce, and is in great demand by farmers and market gardeners, and realises quite a good price. The finer cinders are passed automatically over a magnetic pulley, which arrests nails and fragments of iron and allows the cinders to fall into a receptacle set apart for them; and

then the cinders are mixed with pitch and formed into excellent briquettes, which make a good and cheap fuel.

The larger cinders, after being washed, are used to raise steam for driving the electrical plant at the works, and it is in this respect that the Sheffield enterprise is regarded as a triumph by experts everywhere.

No coal at all is being bought for the furnaces, but the works are run entirely on fuel extracted from the refuse of the dust-heaps. Not only is sufficient current obtained in this cheap way to run the plant at the works, but the surplus is sufficient to charge the batteries of all the electric lorries that go about the city collecting the refuse.

It is remarkable to think that all this wealth should be obtained from rubbish which only a few years ago had to be burned at great expense; and there is little doubt that we are only at the beginning of an era when waste will more and more be utilised for producing wealth.

SHALL WE TURN ON THE COLD?

GOOD IDEA FOR MOTHER
Cold Supply that Might Run to
Houses Through Pipes

KEEPING FOOD IN HOT WEATHER

By a Scientific Expert

Do we use Cold enough? This is a question asked by Dr. William J. Howarth, the City of London medical officer, in discussing the all-important matter of our food supplies.

Next time you go to a tea shop, if you look at the price-card you will almost certainly find it stated that the cream supplied contains so much boric acid as preservative. A certain amount of boric acid is allowed by law, and it certainly makes the cream keep good for a longer time than it would without it. But if the cream were kept sufficiently cold it would keep just as well without any preservative at all.

An enormous amount of our food is kept good in this way by means of chemical preservatives, which are really nothing more than disinfectants, to prevent the growth of the bad bacteria. Yet the most wonderful preservative of all is Cold. We do not use coldness enough. How can it be made available for more general use?

Replacing Chemical Preservatives

The more one inquires into this subject, says Dr. Howarth, the greater becomes the conviction that in a large number of instances chemical preservatives should be replaced by Cold.

Pipes bring gas and water into our homes. Why should not Cold be brought into the home, the factory, and the food-store? Coldness is not only necessary for preserving foods; it is used in many industries and manufactures, even in the making of explosives. Factories generally make their Cold by evaporating ammonia, or by some other process of the kind, which requires a special plant and driving machinery. It would be much more convenient if it could be laid on like gas or electricity from some central station, not only to factories but also to houses.

An Aid to Public Health

If the suggestion of a pipe-line supply of Cold can be put into effect, Dr. Howarth believes it would prove of the greatest advantage to the public health.

The engineering difficulties in the way of such a project are many, though they could, of course, be overcome. Cold things easily extract warmth from their surroundings, and it is just as necessary to protect pipes conveying cold water as to protect hot-water pipes. Perhaps the day will come when we shall have not only Heat but Cold laid on in every home, and by regulating a mixture of the two we shall probably be able to live in a climate which need never vary.

BIG THINGS TO BE DONE

FINDING WORK FOR THE WORKLESS

The Terrible Unemployment Problem this Winter

2000 RELIEF SCHEMES

By Our Political Correspondent

Though the country has been slow in dealing with the vital question of unemployment, and it is to be feared that there will be only a very gradual relief, the proposals of the Government appear to be on very sound lines.

The work that is being projected has two excellent features. It is being arranged so that it will employ widely varied forms of industry, and so stimulate trade over larger areas than those where the work is completed; and it is work which is needed, and will have a permanent value.

In short, the schemes which are being drawn up will not have the defects of the wretched dole system, which gives as little as possible for nothing at all.

Providing Useful Work

What has come to be called the dole produces nothing, and leaves a sense of dissatisfaction behind in all minds.

At least £50,000,000 will be spent this winter on works of decided usefulness, partly by Government help, but also through increased activity in construction of railways and the schemes of the county and municipal councils. £20,000,000 has been allotted in aid of local schemes, particularly road-making and bridge-building. Schemes for such purposes have been sanctioned to the number of 250. Six hundred schemes have been presented by local authorities for sanction, and it is calculated that in all about 2000 schemes for useful work will be pressed forward in the course of the coming winter.

New Bridges to be Built

It may reasonably be anticipated that these many activities will freshen numerous branches of industry. Bridge-building, for example, now makes a call for constructional steel, and no form of employment has more languished of late than steel-making.

Among the larger works to be undertaken is a road bridge over the Tay to Dundee, which will be built of ferro-concrete, and will cost £900,000, spread over about five years. The Tweed, also, is to be bridged afresh near Berwick. A bridge over the Dee near Flint is to be entirely of steel. The county of Durham has undertaken to build 21 new bridges, and Northumberland will reconstruct 82.

Roads relieving congested traffic and facilitating traction are very numerous. The chief of them is a splendid new road between Glasgow and Edinburgh, which will cost £2,000,000 for its 40 miles.

Railway Schemes

Among the enterprises of cities a prominent and interesting advance is being made by Nottingham, which is planning a series of locks on the River Trent, whereby water carriage may be secured to the North Sea.

The railways are responding with vigour to the calls made to them to be up and doing. The Great Western is arranging to spend £4,500,000. The London and North Eastern is spending £1,000,000 on engines, sleeping cars, and wagons, and £500,000 on its permanent way. It is calculated that railway enterprise will stimulate trade to the extent of from £10,000,000 to £15,000,000.

With these evidences of the needs of the country being understood by those who control large quantities of work, the winter outlook, though not bright, is somewhat brightened. Yet much more must be done before the tragedy of unemployment is removed from the land.

The Ride Into the Teeth of the Storm

ADMIRAL BEATTY'S DARK HOUR ON THE LION

Mr. Winston Churchill's Vivid Story of a Thrilling Morning in the War Room

HOW A GREAT VICTORY SLIPPED FROM THE GRASP OF THE FLEET

Looking down on the stalls at a rare little musical play the other night, we saw sitting there, rapt in Schubert's music, the splendid figure of Admiral Beatty. A little later, opening *The Times*, we came across the Admiral again.

But how great a change was there! Could this man rapt in music be the man rapt in war? Rarely, if ever, have we read a thing more stirring than Mr. Winston Churchill's story of a North Sea battle in the dark days of the war.

The German Fleet Comes Out

Into his room at the Admiralty there came one morning unannounced Sir Arthur Wilson, saying: "First Lord, these fellows are coming out again. We have just time to get Beatty there." All the fast German vessels were setting out for the British coast that night.

"We were afoot the next morning while it was still dark," Mr. Churchill writes; "all in the War Room when daylight began out of doors. Suddenly, with the sureness of destiny, a telegram from the Fleet was laid before us. Once again it had all come true."

The enemy was in sight, and from the silent rooms of the Admiralty, with only the clock ticking, and quiet men moving with slips of paper, drawing lines and working out calculations, this little group followed the progress of the first battle between super-Dreadnoughts—the Battle of the Dogger Bank on January 23, 1915.

In the wonderful language of which he is a master Mr. Churchill describes the hours of that exciting morning in the War Room.

Early in the battle came a terrible silence from the Lion, the noble ship of Admiral Beatty. She had not spoken for nearly half an hour, and at one minute past eleven Admiral Jellicoe wirelessed to her: "Are you in action?" No answer came, but at 11.37 came a message from the Second Battle Cruiser reporting a heavy engagement. Somebody said: "Moore is reporting; evidently the Lion is knocked out."

Across my mind (writes Mr. Churchill) there rose a purely irrelevant picture. I thought of the Memorial Services I had so often attended in Westminster Abbey; the crowd and uniforms; the coffin with the Union Jack; the searching music; Beatty! That vision at least was not true; but alas! too true indeed! "The Lion knocked out."

A Great Story

Mr. Churchill's description of the fate of the First Battle Cruiser, with Admiral Beatty on board, is one of the finest pieces of writing in his book. He tells us how the German commander, on discovering himself in the presence of many British warships, collected his ships and ran for home. Admiral Beatty at 8 o'clock was about 14 miles behind, and a tremendous race of all the fastest vessels in the British and German navies began.

In pursuit on land (says Mr. Churchill) the battlefield is stationary and the troops move; in a stern chase at sea the ships alter their relative positions very gradually, while the battlefield rushes past as fast as a horse can gallop. In this posture, therefore, all parties to the event continued for a spell. Meanwhile the speed of the British battle-cruisers developed continually, and it soon became evident that they were gaining on the Germans.

About 9 o'clock the Lion opened fire at the greatest range ever known—20,000 yards. One of its shells, hitting

the Seydlitz at a distance of 17,000 yards, inflicted fearful damage; the entire gun crews perished quickly and flames rose as high as a house.

Now the enemy also began to hit; and Mr. Churchill thus describes what happened to the Lion:

All the three leading German ships concentrated their fire upon the Lion, and for the next hour and a half this noble vessel, hurled forward at her utmost speed, carried the flag of the Admiral into the teeth of the storm.

The sea rose in mighty fountains all around her, which fell in hundreds of tons upon her deck. The splinters from shells bursting close alongside filled the air with fragments. From half-past nine onwards she was repeatedly struck.

A little before ten a gun on the Lion was disabled, and soon the water was flooding her compartments, though the Admiral continued driving her at her full speed. At 10.52 the Lion, which had had 14 hits, was suddenly struck in a vital spot. Her port engine failed, she listed 10 degrees, and her speed sank to 15 knots.

Submarines Appear

At that moment the wash of a periscope was seen, and the admiral, to avoid the submarines, ordered the whole squadron to turn across the rear of the enemy. But events were moving with appalling swiftness, fraught with infinite peril, beyond the Admiral's control:

The Lion was falling far astern of her consorts. Her wireless had been shot away, her searchlights were smashed, and only two signal halyards were left.

Thus, at this crisis, when the great vessels, friend and foe, were shearing through the water at nearly thirty miles an hour and, once deflected, were altering their relationship in space every second, the Lion, carrying in Admiral Beatty the whole spirit and direction of the battle, was crippled and almost dumb.

Her last two signals were "Attack the rear of the enemy," and then, as a parting injunction, "Keep closer to the enemy. Repeat the signal the Admiral is now making." But the flags blowing end on were difficult to read, and none of the battle-cruisers took in the final order.

So Admiral Beatty passed out of the battle; so Admiral Moore passed into the command without knowing.

It is one of the remarkable facts of this event that an admiral was for a full hour in command of the British Fleet without knowing it. Admiral Moore did not know that the Lion had fallen out; the Lion's wireless having failed, the signals were misunderstood, and the misreading of the signals robbed the fleet of its victory.

The Germans Escape

So this thrilling scene of the war came to its end, the Germans escaping. This is how Mr. Churchill describes the coming home of the Lion:

The condition of the Lion seemed for some time critical; her speed fell to eight knots, her list increased, and serious anxiety arose. She was taken in tow by the Indomitable, and in this fashion began her long, slow, and dangerous return to the Forth. Sixty destroyers surrounded her in ceaseless evolutions, protecting her from torpedo or submarine attack all through the night of the 24th and through the 25th. At daylight on the 26th the Lion, amid cheering crowds, was brought safely to anchor at Rosyth.

Mr. Churchill's book is now published by the enterprise of Mr. Thornton Butterworth, and will be read everywhere with the deepest interest.

WHO OWNS THESE LANDS OF FIJI?

A QUESTION HALF A CENTURY OLD

Britain and America Talking Things Over at a Table

NATIONS AND JUSTICE

By Our Political Correspondent

With half the nations of the Earth upside down, it is surprising constantly to find how sensibly nations can act if only they will make up their minds to do so.

Probably few people are aware how continually arbitration courts are sitting to decide points of difference between Great Britain and the United States.

Since 1910 such courts have been in constant existence, though their work has been hampered by the war. Disputes between Americans and Great Britain, and between British subjects and America, go back in some instances a hundred years; in others, eighty years; in others, fifty years. So a Pecuniary Claims Commission sits from time to time, and clears up a batch of cases, but never gets quite up to date. It is sitting now, and the opening case was a sample of the kind that will often occur.

A Lesson to the World

It dates back 49 years. When the British Government annexed the Fiji Islands in 1874 they found four American citizens claiming to hold from native chiefs titles to lands which the Americans had acquired in exchange for muskets, beads, and similar things of small value. Great Britain has held ever since that these American traders had not given reasonable financial consideration for the lands they called their own.

The Americans reply that as their bargain was made before Great Britain annexed the islands Great Britain has nothing to do with it, but that it must be judged according to the native customs prevailing at the time.

That is the first case to be finally decided by the Commission. The quiet, regular action of this Commission in small things is surely a lesson in just dealing between nations that might well be copied by Europe in greater things.

THE STONES OF 800 YEARS

Still Standing in Gloucestershire

One of the great English minsters, Tewkesbury Abbey, in Gloucestershire, has been celebrating the eight-hundredth year of its existence, for it was consecrated in 1123.

From the level of the Severn Valley, Tewkesbury Abbey tells us the story of England since the Norman King Henry the First, but the town of Tewkesbury is 500 years older still. It was the burial place of a Wessex king more than 1100 years ago, and the town still makes a fitting setting for the noble abbey.

Before the stately abbey rose there stood on its site a church enriched by 3000 acres of land. The abbey is the greatest and most majestic church in the West Country. "They dreamt not of a perishable home who could so build."

Around it, and perhaps to some extent in it, was fought the last battle in the absurd Wars of the Roses, for after that deadly strife it was again reconsecrated to cleanse it of the stain of bloodshed.

When the abbey was suppressed in 1540 as a Benedictine sanctuary, it was taken by purchase as their parish church by the people of the town, who were proud of its architectural glories, and today their pride may well be shared by all who realise how much the sacredness of our great Motherland is enhanced by her age-long memories.

THE SUN'S NEW LEASE OF LIFE WHAT WE KNOW FROM A SUNSPOT

The Great Cycle of Waxing and Waning

THE ELEVEN-YEAR MYSTERY

By the C.N. Boy Astronomer

The Sun, though apparently shining just as usual, has lately entered on a new cycle of activity. This is shown in a most interesting way by a sunspot which appeared not long ago.

It is well known that the activity of the Sun waxes and wanes in a definite time. This was discovered early last century by Schwabe, an amateur astronomer of Dessau, who studied the Sun every fine day for forty years. He found that both the size and number of the sunspots varied in a period of eleven and a quarter years, and we now know that all other forms of solar activity keep time with this period.

The magnetic storms emanating from the Sun are most intense at a time of most sunspots, and the coronal streamers seen in a total eclipse are largest then.

A Cycle of Changes

But the curious fact about it all is that the region of the Sun where the greatest agitation occurs also changes with the period. Let us follow these changes through a whole cycle, starting when the spots are largest and most numerous.

At such a time the spots appear chiefly in two zones, one on each side of the Sun's equator, in what corresponds to about 16 degrees north and south solar latitude. As the Sun's activity wanes, these two zones slowly close in toward the equator until, at the time of sunspot minimum, the spots are most frequent in a band extending about seven degrees on either side of it.

Sun Turns a Corner

Here it is that the most interesting feature of the whole cycle takes place. Just when the activity near the equator is dying away, new spots are suddenly seen to break out in very high solar latitudes, perhaps 30 or 35 degrees north and south. Astronomers then know that the Sun has "turned the corner" past its minimum, and that a new period has begun. A year or two after the minimum there are no more spots belonging to the old period, and, as the new maximum approaches, the two new zones of spots gradually draw in toward the equator, until at the time of maximum itself they are back again at their original latitude.

Now the last sunspot maximum was in August 1917, just six years ago, and as the whole cycle lasts eleven years we are now at a time when spots are few and mostly small.

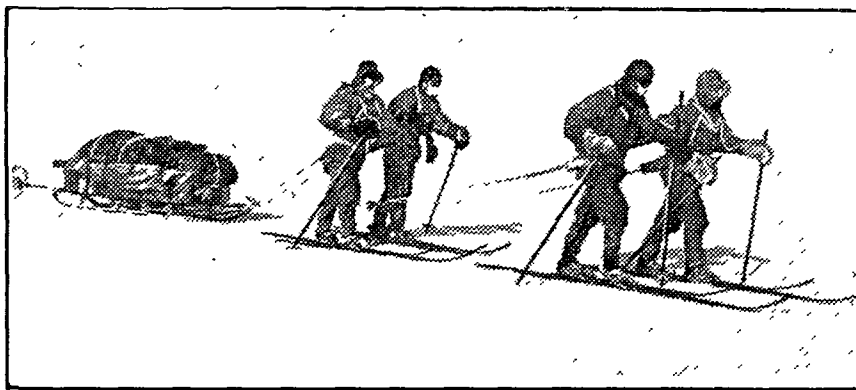
We now know, however, that the Sun has started on a new lease of life, for, although spots of the old cycle are still appearing, a new spot was photographed at Greenwich a few weeks ago in very high south latitude, which shows that it belongs to the new cycle.

The Sun a Variable Star

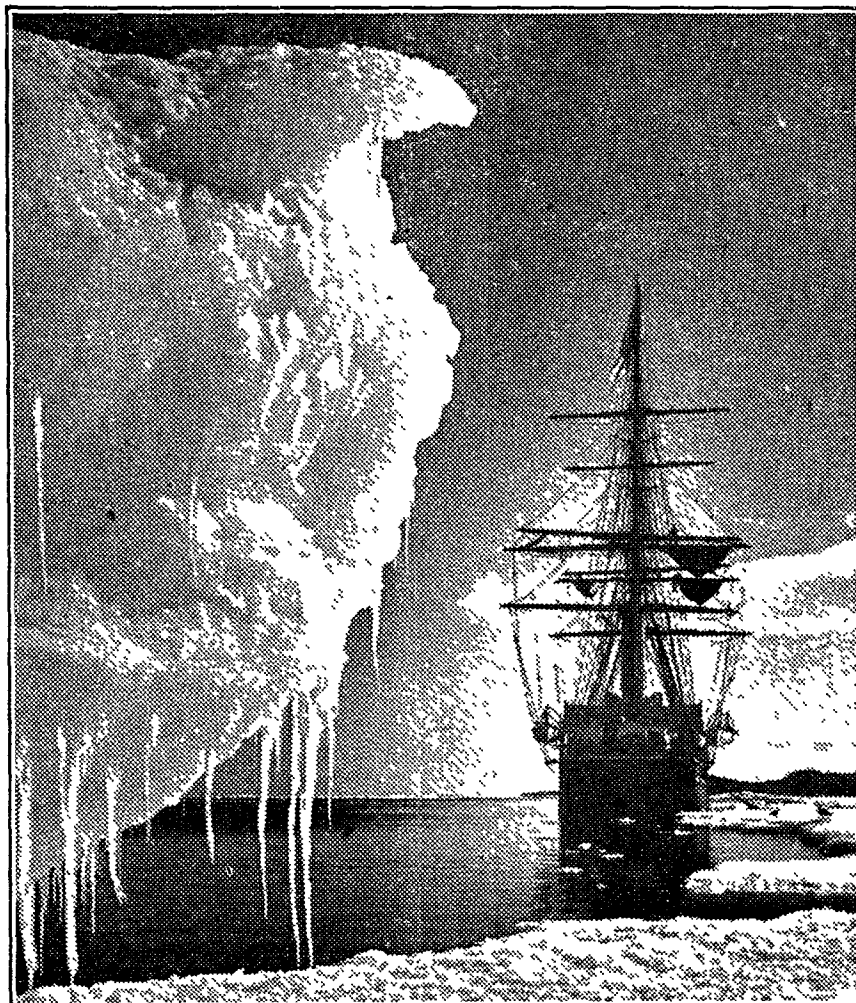
The question of the cause of the eleven-year period in solar activity is very difficult, though extremely interesting. Many stars are known whose light varies in times ranging from a few hours to about 500 days, but we know of no star with as long a period as eleven years. The light of the Sun must be a tiny fraction less when the spots are many than when there are none at all, so that we can consider the Sun as a very special kind of variable star.

It is probable that the solar variations affect us in ways of which we are not yet aware. Many scientists have suggested that the solar cycle has its effect on our weather; and Professor A. E. Douglass has actually discovered variations in the rings of growth of old pine-trees and sequoias which exhibit in a surprising way the solar period of eleven years.

IN THE GREAT WHITE SOUTH



Captain Scott and his companions set out on their fatal journey to the Pole



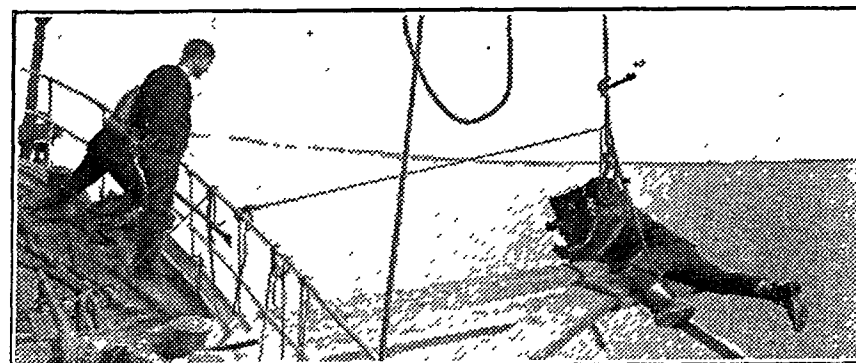
The Terra Nova, Captain Scott's ship, amid the ice



Making astronomical observations in the Antarctic



Captain Oates and the Siberian ponies that went on the expedition



The photographer in an awkward position

There is no more thrilling story of adventure than that of the men who went with Captain Scott in search of the South Pole, and Mr. Herbert G. Ponting has told the story graphically in his book, "The Great White South," from which these pictures are taken. See page 8

KU-KLUX-KLAN

Ridiculous Movement on the Film

GOVERNMENT STOPS IT IN FRANCE

The French Government has for the second time called attention to the very dangerous tendency of the well-known American film called The Birth of a Nation

We are promised an increasing number of British films, and it would be excellent if the coming British Film Week should prove the beginning of a new policy in our picture-houses.

The rubbishy films reaching this country from across the Atlantic have for years been appalling. Though some American films have been truly wonderful productions, and worthy of British audiences, others have been the most veritable and vulgar trash.

In the case of The Birth of a Nation the objection is of another kind. As the C.N. has already pointed out, it is an entirely false representation of American history, and the point of the French Government in prohibiting the film from being shown in France is that the praise the film gives to the ridiculous Ku-Klux-Klan movement is dangerous at this time, and offensive to her black population.

The fact is that the Ku-Klux-Klan is one of the wildest and stupidest secret organisations ever devised, and its purpose is to undermine regular governing institutions by taking affairs into its own hands. The reign of terror it has produced in some of the States of America has brought about a perilous situation, and has in one State led to martial law. There has even been talk of starting the movement in this country.

It is because the French Government will not have this ridiculous Ku-Klux-Klan praised on the films as a patriotic movement that it has again forbidden the film to be shown.

BETTER THAN A STOP-WATCH

Timing High-Speed Motor Cars

An interesting telephone instrument, which is being used on the continent to time very powerful racing cars, has been invented by two French engineers, Galy and Bonnet.

When a car runs past any point at a high speed its movement causes a great rush of air, and this air is being used to move the drum of a telephone.

The telephone drum is fixed to one end of a delicate lever, and to the other end of the lever is fixed a pen. This pen traces an ink line on a sheet of paper attached to a drum revolved by clockwork. When the car passes, the pen is jerked to one side by the movement of the telephone and makes a sort of notch, or V, in the otherwise straight line.

There are three pens drawing three parallel lines along the paper chart. The first pen is attached to the telephone at the starting-point, the third pen to a telephone at the finishing point, while the middle pen is jerked every second by a clockwork device, making a V in the middle line each second. The distant telephone at the finishing point is connected by telegraph lines to the recording instrument.

When a racing car is being timed, a V is made by the first pen as the car passes the first point, and a V is made by the third pen when the run is finished. By counting the number of V's made by the middle pen, the number of seconds the car took between the two points is easily counted.

In this way the time taken by a car to travel over a given distance is being recorded with an accuracy far beyond that of the stop-watch.

CITY OF OPTIMISTS GIANT RESERVOIR OF BELFAST

Work to Cost a Million Pounds
and Take Six Years

FILLING UP THE SILENT VALLEY

Belfast, in a true spirit of optimism, has just begun to build a giant reservoir to supply itself with water at the rate of thirty million gallons a day, or enough for a population twice as large as the city has today. Belfast, at any rate, has no doubts about a great and prosperous commercial future.

Away in the Silent Valley, forty miles from Belfast, where the River Kilkeel winds its way to the sea, a great embankment of clay and granite is to be built across the river, and this, when finished, will dam up and store 3000 million gallons of water, forming a lake two miles long and a third of a mile wide.

The river itself is to be diverted from its present course, and five hundred men will be engaged on the work for the next six years. The cost will be at least a million pounds.

The outlet tunnel from the reservoir will be capable of discharging 2270 cubic feet of water a second, or over 4200 tons a minute, which means a daily output of 1225 million gallons.

A New Railway

The site of the great reservoir is in a rather isolated and remote district, and in order to convey the clay, granite, concrete, and other materials to the spot a railway nearly six miles long is to be built. This will not be a mere tramway or light railway, but a full standard gauge railway.

A million tons of clay alone have to be moved, beside a vast amount of other material, and the 500 workmen will have to travel backwards and forwards on the railway every day.

Huts to house the workmen and a hospital are being built, and these will form quite a village when finished. For the next six years the Silent Valley will be far from silent.

Altogether this great reservoir will be one of the finest water storage works to be found anywhere in Ireland.

A STAMPEDE OF PIGS

Plunge into a River

A strange incident occurred the other day at Bridgwater, in Somersetshire, which is curiously like a well-known story in the Bible.

We all remember how the herd of two thousand swine, feeding by the Sea of Galilee near Gadara, "ran violently down a steep place into the sea," as described so vividly in the fifth chapter of St. Mark's Gospel.

At Bridgwater a smaller number of pigs was being driven through the streets when they suddenly became frightened, and the panic spread until they all rushed madly down a steep roadway into the River Parret.

The fate of the Gadarene swine, however, was not repeated here, for these Somersetshire pigs were not choked by the water, but, after swimming across the river, were helped out on the opposite bank and continued their journey, apparently none the worse for their exciting experience.

Incidentally, what happened disposed of the old idea that pigs cannot swim because when they try to do so they tear their throats with their front feet. These pigs swam quite well.

Pronunciations in This Paper

| | |
|----------------------|-------------|
| Chanties | Shan-teez |
| Cromarty | Krom-ar-te |
| Gadara | Gad-ah-rah |
| Margarine | Mar-gar-een |
| Perseus | Pers-yoos |
| Tewkesbury | Tewks-ber-e |

PICTURES FROM THE TREE-TOPS

THE KINEMA AT ITS BEST

The Splendid Films of Birds in
Their Own Homes

POLYTECHNIC AND NATURE

By Our Kinema Correspondent

It was the boyhood passion of Walter Greenway, that most remarkable hero of the war, to climb up waterspouts and invade a house from its top windows. It seems to be the passion of Captain Knight, another hero of the war, to climb to the tops of trees and peep into the homes of birds.

He has done it wonderfully well, and what he saw we, too, can see, for he has brought the pictures down from the tree-tops and is showing them at the London Polytechnic.

The C.N. would like to congratulate the Polytechnic on its good sense and enterprise in making this famous hall a home for the kinema at its very best. It is to be devoted to glorious films taken by lovers of Nature and not by hunters. It is an enterprise that will give delight to good people, and we look forward to many pleasant hours in this famous old place in the heart of London town.

The Woodpecker Cracks a Nut

All who are interested in Nature, who would probe into the depths of her mysteries and watch her unfolding countless wonders, should hear Captain Knight's lecture at the Polytechnic.

The captain, with his wonderful film, puts before us pictures of birds showing how various parts of their bodies function, how they eat, move, and rest. He shows us the life-history of many birds from the time the eggs are laid to the time when the young are fully grown and fly out into the world.

How many of us realise how the woodpecker cracks his nuts? He chooses a crevice in the trunk of a tree, wedges the nut into it with his beak, and pecks until there is a hole big enough for him to extract the kernel. While he is doing this he supports himself on the side of the tree, using his tail as a prop.

The Rook at Home

Like many other birds, the woodpecker is sorely misjudged. Farmers say that because he makes holes in trees he kills the tree, but this bird does not use living trunks but dead ones.

Let us climb with Captain Knight, and study the rook at home. He and his mate are both very fine, the jet-black plumage shining in the sun with not a feather out of place. We see the young rooks come from the eggs, and the parents ever on the move in search of food. We see them fully fledged, waiting until their wings are strong enough to fly. At last we see them clambering to the top of the tree, and, after a few flappings of their wings, making a final flutter. Away they fly, and when autumn falls, and once again the ploughman tills the fields, the rooks spread like a black cloud above the newly-turned soil, devouring the larvae of insects which, if allowed to live, would do untold harm to the crops.

The Heron at Dinner

We love the pictures of the heron. Why does this great bird build its nest in the tops of trees?

The heron, for all its gracefulness, reminds one of a snake when it eats. It has no manners, but seizes a whole fish, a water-rat, or an eel, and swallows it whole, the neck seeming to stretch to any size. The young heron is apparently afflicted with the nasty habit of disgorging its last meal when frightened. Captain Knight was able to photograph a young bird actually in the act, and out came a water-rat and eel, and several fishes and shrimps.

These heron pictures bring us to the close of an hour and a half among the birds in their natural state, and we feel as we leave the hall a great appreciation of the patient and tireless months Captain Knight has spent to procure these films. We feel glad, also, that these films have been taken, in the very homes of the birds, by men who love birds too

SOUTH AFRICA SAFE OPTIMISM OF THE PRIME MINISTER

End of the Great Anxiety of a
Nation

A GREAT AND NOBLE ESTATE

It is good to see the optimism with which General Smuts speaks of South Africa and its future. This is what he said in laying the foundation stone of the South African Pavilion at next year's British Empire Exhibition.

We have been experimenting for generations in South Africa. We have been working through very grave troubles, political and national, such as other young countries have not had to cope with. We have had to clear our area, so to speak, politically and otherwise, in order that we might make a proper start. We have passed through several generations of pioneering, political and national, of a very severe type.

That work is done, thank God, and South Africa is today a country about whose future no one could have any doubt whatever. It need not cause any person, either here or elsewhere, one sleepless minute. The future of South Africa is safe, and all that is wanted now is that we should resolutely move forward and try to make up, as fast as possible, for the time which has been lost already.

The March Forward

We have a great country. We are only now in process of reaching some of the very richest parts of South Africa in the forward march. We are developing parts of South Africa which are peculiarly adapted to the growth of cotton. Great as has been the development in the wool industry, I have little doubt that in a comparatively short time the dimensions of our cotton industry will be greater than those of wool.

Our principal trouble is going to be markets. All the countries of the world which are great producers of raw material are crowding in on certain markets. The markets of the world have contracted, purchasing power has gone down, and on the remaining markets there is a great crowding from all quarters. We wish to have our place in the sun, too, and our share of this great English market.

All over the Empire we want to see that. We have a great and noble estate, such as the world has never seen in all its history, and we are called upon to devote all our energy to the development of that estate and to handing down to the future a group of States much more developed and flourishing than those which were given to us.

A GENERATION'S GOOD PROGRESS

Nation More Sober

Some very interesting figures have just been published by Mr. George Wilson, from which we see that England is solving her great Drink problem in her own way.

It is pointed out that if the brewers had last year brewed at the rate of thirty years ago, they would have brewed 15 million barrels more.

In 1892 the quantity of beer drunk was 36 million barrels; in 1922 it was 21 millions. The spirits drunk in 1892 were 24 million gallons; in 1922 they were half.

It is entirely beyond doubt that, thanks to education, growing good sense, the provision of healthy amusement, and the increasing love of open air delights, England is more sober than ever she was.

Continued from the previous column

much to kill them, who show us Nature as she is, and bring her wonders before our eyes without the painful feeling that our pleasure has been purchased by the cruelty of a hunter or the meanness of a so-called sportsman. Picture on page one

WORLD'S TRANSPORT PROBLEM

RENEWING THE WASTE
OF THE WAR

Nearly Three-Quarters of a
Million Miles of Railways

NEW WAYS OF TRAVEL

The world's problem today is largely a question of transport. When travel is difficult the people are kept apart, suspicions grow, the world's wealth cannot be well distributed, and everyone is poorer.

It is improved methods of transport that have made the world as comfortable a place to live in as it is today for most of us. A hundred years ago half the comforts and luxuries now within the reach of the humblest were not available even for the rich, for the means of carrying them across the seas and continents did not exist.

Across Asia by Camel Caravan

Bananas, for instance, could not be brought by the million from the West Indies, nor apples from Nova Scotia and Tasmania, nor oranges from California and South Africa, nor butter and mutton from Australia and New Zealand, nor beef from the Argentine, nor eggs from China and North Africa, nor fish from Japan and British Columbia. Now they are commonplaces of everyday life, and we buy them cheaply in every town and village because of the amazingly improved methods of transport.

But the terrible wear and tear of the war has not yet been made up even in Britain. Every country suffered. Those actually fighting had to use up their railway stocks for war purposes, without being able to renew them adequately, while countries not actually at war were unable to keep their railways up to date.

Then the revolutions following the war upset transport of a more primitive character, and the camel and yak caravans which used to pass from China across Mongolia to Central Asia, and across Persia and Arabia, ceased altogether, and are only now being resumed.

Making Up for Lost Time

The transport map on page five, taken from the wonderful Picture Atlas of the Children's Encyclopedia, gives a vivid idea of the enormous variety of methods in use today all over the world. With the newest inventions, like the aeroplane and airship and motor-car, go the oldest of all methods, the camel caravan, the pack-horse, the ox-wagon, the sail-barrow, and the reindeer sleigh and llama, these more primitive methods being in full use today over hundreds of thousands of square miles of backward countries.

Now that many of the nations are able to turn their minds once again to peace pursuits, the lost time is being made up. New railways are being planned and built in every continent, mountain ranges are being pierced, and wide rivers spanned.

Solving the Transport Difficulty

Rivers are being widened and new canals cut all over Europe, distant seas like the Black Sea and the Baltic are being linked up by connected waterways, and, as in the case of Panama, continents are being cut in two and oceans connected. Thousands of miles of new motor roads are being constructed in a score of countries.

So, with oil-burning liners, petrol vehicles, and electric barges, the nations have once more set out on an era of transport improvement and development, which will eventually do much to solve the difficulties of a war-worn world.

There are now in the world nearly three-quarters of a million miles of railways, the United States being easily first with over a quarter of a million miles, and Persia easily last with less than a hundred miles.

PICTURE-MAP OF THE WORLD SHOWING TRANSPORT METHODS IN MANY LANDS



BROTHERS GO EXPLORING Old Men's Ride Across Australia

Two seventy-year-old brothers named McCallum, twins, have been showing a splendid example to their younger countrymen.

These two old gentlemen have crossed Australia from south coast to north coast and back, covering 6000 miles in 67 days, using three motor-cars.

It is interesting to hear that these two explorers confirm the enthusiastic reports that have recently been made as to the possibilities of the Australian interior, so often looked upon as a worthless desert.

They report that there are stretches of wonderfully fertile soil, and, when we remember that even fifty or sixty years ago thousands of square miles of America's richest land were considered desert, there is no limit to the opportunities for development in Australia.

A SHIP LOST EVERY DAY How They Go

Lloyd's Register, the great institution which watches the world's shipping, has told us how many ships were lost last year.

It is surprising to find that, in spite of all the improvements in ships and their navigation, there were lost in a single year 350 steamships and 144 sailing ships, counting only vessels of over 100 tons burden.

Thirty-four ships were abandoned at sea, 105 foundered, 43 were reported missing, 55 were burned, 25 were lost in collisions, 214 were wrecked, and 18 otherwise lost. This includes ships of all nations.

The sea thus still takes a heavy toll. To take our own country alone, over a thousand sailors and fishermen are lost every year, while several thousands are injured. Seafaring remains one of the most dangerous of trades.

AN AMAZING RIDE A Stupid Boy's Marvellous Adventures

A Hungarian boy has had what is surely the most sensational railway ride that ever a foolish boy attempted. As the Orient express entered the station of Troyes a boy's hand was seen hanging down underneath a luggage van.

When he was lifted from his perilous position the lad was found to be covered with dirt, and his clothes were torn and smeared with oil.

In reply to questions, he said he had come under the train, lying on the bogey, from Budapest, nearly 1000 miles away, and had been lying there for 39 hours.

He was taking this way of getting to Verdun, the most famous of the towns round which the Great War raged. There he had hoped to find work.

Such a senseless action leaves no room for admiration, but it abounds with marvels and mercies, the greatest wonders of all being how the fatigue was endured and how the boy escaped death.

TWO MONTHS IN A BOTTLE Story of a Baby Eel

Dr. Schmidt, the Copenhagen scientist who has been studying for so long the origin and life-history of the eel, mentions in his latest observations the exceptional resistance of eels.

Some months ago one of the doctor's New York correspondents sent him a specimen of a baby eel captured in the Pacific. The parcel reached Copenhagen in May, and could only be opened in June. The bottle of water with the fish had been carefully corked with wax and shut up in a tin, and when Dr. Schmidt opened the bottle a young and quite lively eel glided out of it.

The little fish had withstood a rigorous two months' imprisonment and darkness in its small bottle of water.

MAN IN A BLOCK OF ASPHALT An Extraordinary Accident

America is often to the fore with things that are new to the world. Her latest contribution is a completely new form of accident.

Walking along an unlighted street in Canton, Ohio, a workman stumbled over a heap left where street works were in progress by day, and was pitched into a deep pool of cooling asphalt.

The clinging stuff held him firmly in its warm embrace, and the more he struggled the more he sank, till only his head, one shoulder, and one arm were free from the mass.

Nobody came along, and it was not till morning that his cries were heard; and by that time the asphalt had cooled and encased him in a solid block so that he was held a firm prisoner.

He remained conscious and not seriously hurt, and he was at last chipped out carefully by the men who returned to their work.

PITCAIRN ISLAND Grand-Daughter of Adams of the Bounty

The mother of one of the readers of the C.N. writes to say that her grandfather was the brother of John Adams, or Alexander Smith, one of the original mutineers of the Bounty. It was Adams who first used his influence to begin orderly life in Pitcairn Island, and established a moral authority over the little community.

Our correspondent says the Pitcairn Islanders did not know till lately that they had relatives living in England, but she has opened up communication with them. She does not mention whether she has come into touch with the two Pitcairn islanders who have been recently in England.

REIGATE HILL FOR US ALL Who Will Help to Buy It?

There will be a moment on November 5 which may decide whether one of the finest view-points in Surrey and twenty acres of delightful recreative hill country will become national property for the enjoyment of all of us, or will be offered for possible extinction as a beauty spot by the encroaching builder.

That is the time when Reigate Hill may be saved by the Reigate and Redhill Open Spaces and Footpaths Preservation Society purchasing it for £2500. The society has already paid £250 to secure the option of purchase. On November 5 it will have to pay over the balance of £2250 to save the hill for the public for ever.

Everyone in the neighbourhood of Reigate must feel that this is an opportunity which ought to be seized.

The site is beautiful in itself and commanding in its outlook, and we bespeak for the public-spirited society that is acting for the National Trust the practical help of all who sympathise with this splendid movement.

The vicar of Reigate is the chairman, and our good C.N. friend, Mr. Arthur Trower, of Wiggie, Redhill, will receive contributions.

THE SLOT MACHINES A University Idea

America seems to be using slot machines for almost every conceivable purpose. She has penny-in-the-slot radio, nickel-in-the-slot drinks, and so on; and now we hear of a penny-in-the-slot fountain-pen filler in the University of Chicago.

The dropping of a coin into this machine releases a quantity of ink into a small reservoir, from which the fountain-pens can be filled. As this university has about ten thousand students this machine should do a good business.

CHILDREN'S NEWSPAPER

NOVEMBER 3 1923

A Miner Writes to the Editor

Last week we gave this column to a Prime Minister; now we give it to a miner. We give his letter here, letting our miner talk to a million people, because we believe the world should know what such men feel, and because we believe that such as he are truly among the salt of the Earth.

FOR the good of your health, and the benefit of your most interesting paper, your miner friend from Scotland wishes to give you a little bit of advice.

Mr. Editor, I wish you would stop preaching Patience in your paper. As far as I can see, if our ancestors had preached and practised Patience we would still be living in the Stone Age.

I am no extremist, although I am violently discontented with things as they are at present—millions starving mentally and physically in the midst of plenty! Who can be contented with that?

I sometimes come in contact with some of the people you describe as hot-headed, and I am being forced reluctantly to the conclusion that these people are the salt of the Earth. They are the driving-force to reform. They are the heralds of a brighter and saner time to come.

Mr. Editor, I wish to ask you a straight, personal question: If you were placed in the position of millions of working people, and forced to live in a single kitchen; if you were forced to bring up your family on the wage of a miner, and work and live as miners do, would you be patient? I don't wish to be harsh or unjust to you, but I sometimes think it would be easy for me to be patient if I had the income of a big number of people.

Mr. Editor, if the affairs of this world could only be reversed for a little time, and those who are at present comfortable were deprived of their comfort, and those who are at present uncomfortable were to be made comfortable, who would be the rebels then? Who would preach contentment then? Who would counsel us to be patient? It would be an interesting experiment.

In the meantime, Mr. Editor, I enclose a little motto for you, to pin up where you can easily read it the next time you sit down to write. The motto, from George Eliot, is: *It is easy finding reasons why other folks should be patient.* Your Miner Friend

Dear Miner Friend,

Every good man is sorrowful for those who suffer; every good man is impatient to get the world straight again.

But if impatience has brought us from the Stone Age to the Wireless Age, was it not impatience in 1914 which brought us where we are?

Among impatient—among those who would sweep away evil and set up the Kingdom of Heaven on Earth—we are the most impatient of them all; but must we not be patient in a ruined world, lest we take the wrong road to the Better Days?

EDITOR



THE EDITOR'S TABLE

Fleetway House, Farringdon Street, London
above the hidden waters of the ancient River
Fleet, the cradle of the Journalism of the world



The Better Way

SOMEbody has been talking about writing the Bible down to the people. We would much rather educate the people up to the Bible.

The Way of a Passer-By

Is there anything on Earth so strange as the working of the human mind? Is there anything so tragic as the mind that has no pride or dignity?

We are moved to ask these questions by a simple fact of life that came before our eyes the other day. The long and winding drive up a hill in a village of Kent was being tarred, and the barrels were left on the bank. It would seem to be incredible, but it amused some passers-by to take a barrel off the bank and set it in the middle of the drive, for the next car coming down the hill to run into!



The Race that Never Stops

Wanted, Some Imagination

WILL it be a hundred years or a thousand years, we wonder, before imagination penetrates the minds of some people? On every hand we see the pity of the lack of it.

We see a building rise in the heart of London with a noble front, and these great walls, on which a fortune has been spent, are given over to a few illiterates who do not know the language that we speak.

We have seen one of the greatest shops in London, with one of the best-known names, build up its new front with its name wrongly spelt in letters of steel.

We have seen a great new picture-house, with a front admired by passing millions, daub the front after the first few days with posters that would disgrace a barn.

We have seen for years the great headquarters of Methodism, the huge hall built out of the Million Guinea Fund, left unfinished for a small economy, until it is known as the ugliest bit of Westminster, spoiling the fairest scene that London has.

Truly imagination is a noble thing; well may we pray that it may spread out far and wide.

Think Finely

THAT is an excellent idea of Mr. Kipling's. The standard of living has risen: *all the more reason why the standard of thought should rise with it.*

We shall all be better for raising our thinking to a fine height.

Tip-Cat

WHAT keeps this old world going, after all, is that it never needs as much as it wants.

GOD made the country, but man made the charabanc.

PEOPLE in poor countries live longer than people in rich. And have longer faces.

THE Jazz is dying. It always sounds like it.

A GROWN-UP paper inquires, What is the world coming to? We are more anxious to know when it is coming to.

CLOTHES make the man, we are told. That is, of course, after man has made the clothes.

THE greatest undeveloped resources of the British Empire are its people.

A GARDENER complains that a roof-garden requires some keeping up—to prevent it from coming through the ceiling.

FURS will be much worn this winter. Ours are already.

OF a famous politician it is said that work is the breath of his nostrils. It would not be true to say he does no other.

FEW people in this country have a good digestion. Many do not need one for what they get to digest.

The Treasury and Its Pictures

SOME correspondents of The Times have been complaining of the faults of our Treasury notes. We are told that the figure of St. George is rather C3 than A1. Also, our great hero is striking the dragon while its back is turned. The arm of Britannia, too, is said to be growing out of her body like the bough of a tree.

We shall all be glad to have these things attended to; and if any of our readers are dissatisfied with these pictures we are sure Lord Knutsford will be glad to accept them for the London Hospital.

One thing we may all be grateful for in these days—that while francs and kroners and roubles and marks are dancing up and down, the Treasury note is what it is, with ten shillings or twenty shillings behind every one.

No Chance

By Harold Begbie

A MAN stood up and faced the world

With angry lips and scornful glance:

"A failure, yes; a broken wreck. But stop; I never had a chance. My youth was pinched with want and woe;

I longed for pow'r; I lied, I stole.

I never had one decent chance! How dare you judge my soul?"

AN old grey widow standing there,

Of gentle face and humble ways,

Looked slowly up, and on the man

Fixed all the question of her gaze.

"No chance—of what?" she asked, in tones

As steadfast as her patient eyes.

The broken man burst out: "What chance?"

I mean, a chance to rise!"

THEN spoke that dame, with strong reproach:

"There came, my friend, such chance each day;

The chance to help the weak, the chance

To cheer the lonesome on their way.

By chances such as these alone

We rise, we climb, we reach our goals;

And as we use them, we ourselves Pass judgment on our souls."

Wise Things Just Said

General Smuts, bidding good-bye to the young people of the South African Party:

We older people are very much wiser than you younger people. We know from our experiences how much wiser we are.

Mr. Ford, the motor-car man, talking of politics and industry:

Politics was invented before the scientific era, so politics and industry can't travel along exactly the same lines yet. The industrialist has to find out what the people want and get it to them. The politician can still content himself with finding out what they think they want and promising it.

From a pamphlet issued by the National Union of Students:

The war has left behind a spirit of suspicion, jealousy, and hatred. The fruits of this spirit are strife, unrest, disorder, misery, and the deterioration of man's moral and spiritual fibre. It is for youth to disown this sinister legacy, to refuse to acquiesce in a scheme of things for which they are not responsible, and to remould the scheme "to their hearts' desire."

Mr. Rudyard Kipling, in his talk to the students of St. Andrews:

More and more is our world, fresh from the shadow of death, beginning to understand that it contains matter enough for all minds to explore, delight in, and interpret with every gift of reason, daring, and reverence that they possess.

Sir Alfred Yarrow, the great ship-builder, on returning from the United States:

There is no unemployment in the United States. We have to face the fact that, owing to Prohibition, competition with the United States will be greater than ever.



PETER PUCK
WANTS TO
KNOW
When public
opinion will
strike against
strikes

KING COAL AND KING OIL

DID THEY COME FROM THE SAME FORESTS?

New Theory of the Origin of the Sources of Power

TRIUMPH OF RESEARCH

Once upon a time it was thought that oil came from the bodies of small animals, which perished long ago; we used to like to say as we rushed along in our motor-cars that we were riding on the back of a trilobite!

But now it is held to be almost beyond dispute that oil is not of animal but of vegetable origin.

Exactly how it came to be where it is found was never clear, some experts thinking that it was due to the action of water on certain carbides beneath the Earth's crust, while others believed it was volcanic.

Coal and Oil in the Earth

Later researches, however, have largely exploded these theories, and the latest opinion is that the oil is a product of forests similar to those which produced coal.

Mr. E. H. Cunningham-Craig, speaking the other day at the Institute of Petroleum Technologists, explained how this belief has come to be held.

The experts who studied the subject were struck by a very noticeable fact. It was found that there seemed to be a close connection between the coal and oil in the earth. In Assam, for instance, a coal-bearing series of rocks succeeds an oil-bearing series, but the two overlap to some extent. In Trinidad three oil-bearing series of rocks are represented in a similar position in another district by coal-bearing layers.

This gave rise to the idea that the forests which in one place and under one set of conditions produce coal, in another place and under other conditions produce oil. Working on this idea experiments were made.

Turning Coal into Oil

Coal containing a fair percentage of volatile matter—that is, matter which under heat goes off as vapour—was treated with hydrogen under high pressure and at high temperatures, and the solid fuel became an oil which was just like crude petroleum.

There is less hydrogen in coal than there was in the plants which formed it, and to make oil from coal in the way described it is necessary to add hydrogen. Now, before the vegetable matter of the forest has reached the coal stage it is still rich in hydrogen, and the scientists believed that if they treated such vegetable matter to high temperatures under great pressure they would obtain petroleum.

But before doing this they took another matter into consideration. They found that in the earth those deposits of vegetable origin which were most free from inorganic matter had attained the coal stage earliest; and that the kind of coal called cannel, which is very impure, yielded most oil under their experiments.

Transformed Vegetation

From this they have reasoned that the plants changed into coal where the vegetable matter of the dead and buried forest remained purest and was least mixed with mineral matter; but where the vegetable matter was much mixed with mineral matter oil instead of coal was formed.

Experiments have largely confirmed this view, and the men of science now speak confidently of oil as a product of past vegetation. The oil-shales from which petroleum can be obtained by distillation they speak of as petroleum "dead and buried"—that is to say, the material was once oil, but did not remain so. The cannel coals they speak of as petroleum "still-born," that is it was on its way to become oil, but the process was arrested.

GENERAL OGLETHORPE REMAINS AT HOME

ATLANTA, in Georgia, is not to have in its university grounds the body of General Oglethorpe, the Englishman who founded Georgia.

The application by the President of the University was withdrawn when it was seen that English feeling was against disinterring from his wife's side a notable man who was English and not American, and that feeling in Georgia was divided respecting the importation of the Englishman's body. Rivalry arose between

the Georgian towns of Atlanta and Savannah. General Oglethorpe founded Savannah. He did not found Atlanta. So Savannah objected to Atlanta's project. Rivalry between neighbouring American cities is often an amusing and somewhat undignified spectacle, and its rise in this instance would have been quite sufficient to spoil Atlanta's application, even if there had not been stronger objections to the removal of General Oglethorpe's body from his native land.

WHAT TO LOOK FOR AT THE ZOO



Puncho, the clever Zoo monkey, lacing up a shoe



The lion cubs enjoying a game of football

The young animals at the London Zoo enjoy a game as much as any human children; and here we see Puncho, the clever monkey, and the fine little lion cubs that were recently born in the Zoo, amusing themselves in different ways

NEWS FROM EVERYWHERE

Westminster Hospital is spending £50,000 on rebuilding.

Preparations for reopening the tomb of Tutankhamen have already been begun at Luxor.

Other Towns Please Follow

The Sunderland Watch Committee has forbidden the use of swearing by actors on the stage.

Prohibition in Constantinople

Constantinople is now under Prohibition, the Turkish Government having closed all the breweries and wine stores.

Naval Men Who Cannot Swim

Admiral Sir S. Fremantle has drawn attention to the large number of men in the Royal Navy who cannot swim, and he thinks this high percentage is discreditable to the Navy.

A hundred people a day go to see Longfellow's house in America.

An aeroplane flight from New York to Pekin is being planned, via Alaska, thus avoiding the long ocean crossing.

World's Oldest Capital

It has been discovered through some stone tablets found in Mesopotamia that Kish was the oldest capital in the world.

Cutting Wood With Paper

At a scientific exhibition at Kingston one exhibit was a circular saw made up of 24 million German marks, which, revolving at a great speed, cut wood.

Trees which Give Tallow

A Japanese tree has been recently grown in Texas which bears nuts that contain tallow. The tree grows well in the soil of Texas, and will help out the supplies of animal tallow, which are in great demand.

A DREAM COMES TRUE

THE MEN WHO LOVE THE HILLS

3000 Acres of Hilltops Given to the Nation for Ever

NOBLE MEMORIAL OF OUR HEROES

Who does not love a hilltop? And who will not be thrilled by the gift of 3000 acres of hilltops to the English people for ever?

For years a little company of climbers has loved the hills around the English Lakes, and now the idea has come to these climbers of spreading their delight in the hills to whosoever will, and for all time. They would carry on through the ages, for the children and the children's children, the sheer natural joy of the hilltops they have loved.

And so it has been done; the dream of the little band of climbers has come true. It is a Peace Memorial.

The memory of the brave dead who gave themselves for their country has inspired in those who live and mourn their loss some heart-moving memorials, but no one of these surpasses in beauty of conception, splendid permanence, and stirring appeal that of the Fell and Rock Climbing Club of the Lake District.

Tablet on the Mountain-Top

On the side of Great Gable, at the foot of the Napes Needle, one of the great tests of the rock climber, will be placed a durable tablet, with the name of the club, and a relief map of nearly three thousand acres of mountain heads around, all above the 1500 feet altitude line, and below it this tribute and story:

In glorious and happy memory of those whose names are inscribed below, members of this club who died for their country in the European War, 1914-1918, these fells were acquired by their fellow members and by them vested in the National Trust, for the use and enjoyment of the people of our land for all time.

The club has 450 members, and the names of 20 who were members will be inscribed in honour, high among the mountain peaks they loved.

The Noble Pinnacles

Tens of thousands who have climbed these glorious mountains, which, from a single broad-spread base, form the most massive and lofty pile of old England, divided into more than a dozen summits, must have asked themselves, Why cannot this noble many-pinnacled upland be free? And now it is free for ever, through the lovely bond of comradeship that has linked the living and the dead.

Already, through the generosity of Lord Leconfield, Scafell Pike had been secured as a Lakeland War Memorial, and Scafell itself by the Climbing Club, though the Mickledore Chasm between is not included; and now Great Gable and Green Gable, Kirk Fell, Great End, Brandreth, Lingmell, Allen Crag, Seathwaite Fell, and Glaramara are all added, and only Bow Fell, Hanging Knott, and Crinkle Crag are needed for the whole of this topmost mass of England to be the nucleus of a National Lake District park, reserved for the enjoyment of all succeeding generations of Englishmen.

Marks on the Rock of Time

There is sadness in the thought that but for the loss and pity of the war this redemption of the heights, so natural and necessary, might long have remained a dream unfulfilled. Its realisation now shows how splendid men rise, through their feelings and their noble enthusiasm, to a wisdom high above their halting prudence, and do under the stress of emotion what will be felt, universally and for ever, to be wise and supremely good.

Truly the Fell and Rock Climbing Club has, as Mr. F. D. Acland said when receiving the gift on behalf of the National Trust, "left its marks on the rock of Time."

Picture on page 12

INSIDE THE EARTH THE ENERGY BELOW GROUND

Why Tokio Can Never Have
Tubes Like London

HIDDEN CAUSES OF DISASTER

One of the lessons of the great earthquake which could not have been predicted is that Tokio, when it rises from its ashes, will never be able to have underground railways.

Tubes like those in London have been a dream of engineers in the Japanese capital, but the earthquake has shown that such a scheme may be attended by results so fatal as to make the plan impossible.

So Tokio, with its traffic problems above ground, must share the resignation of Venice, whose traffic is entirely on water. No horses are there, for Venice has canals, not roadways. And she can never sink structures beneath the surface on which the city stands, because the whole place is built on artificial foundations. Venice rests on piles driven into the flooded land to which her ancestors fled when Attila was scourging Europe.

Countries Without Coal

Conditions below the surface have hidden but important effects upon human life and prospects. Italy, centred on a system of volcanic heat and energy, has practically no native coal; it has all been consumed by subterranean fires. Ireland has lost great coal measures not so much through volcanic agency as by time.

The areas containing her ancient buried forests, which had turned to coal, were thrust up into the air, and age upon age of geological action, the wear and tear of winds and rains, of frosts and heat, have worn away those riches, save in insignificant quantities.

Tapping Volcanic Heat

Italians have been scattered to the ends of the Earth through lack of coal to support home industries; 50,000 Italians used to emigrate every year from Italy before the war, only because subterranean action had long ago eaten up the precious mineral indispensable to manufactures.

In parts of Italy during the war these buried sources of energy were tapped. Volcanic heat was conducted to the surface by means of pipes, and utilised, like water-power or electric current, to drive engines, create electricity, and light towns.

Sometimes the energy beneath the Earth acts in the open without our knowledge. Such has long been the case in Java. Tradition speaks of great upas trees whose deadly influence is such that the atmosphere for miles round an upas tree is said to stifle human and animal life.

The Valley of Death

The deadly properties of the upas tree, exercised in this manner, are a figment of imagination, one of the things that made travellers' tales marvellous but absurd in the Middle Ages, when men went abroad seldom and believed everything that ignorance or mischief told them.

The actual valley in Java where the tree is said to cause death in this manner has a deadly peril which rumour has not exaggerated, but the peril is not from the upas tree. It is really from an old volcanic crater. From fissures in the surface deadly fumes of gas are emitted from the slumbering furnace deep below.

It is this gas, not the upas tree, which kills. It is so powerful that great animals, such as tigers and rhinoceroses, fall victims to it.

The Man Who Went Out With Scott GREAT BOOK OF THE GREAT WHITE SOUTH

A Vivid Gallery of Pictures and a Thrilling
Story of Adventure Within the Reach of All

MR. PONTING'S NOBLE RECORD OF OUR GALLANT COUNTRYMEN

The Great White South. By Herbert G. Ponting. (Duckworth 7s. 6d.)

The expeditions of Shackleton and Scott to the Antarctic continent have produced some fine literature, magnificently illustrated—books unsurpassed, and perhaps unequalled, in the whole story of travel. But these books have necessarily been expensive to the purchaser, and therefore very restricted in circulation outside wealthy circles and the libraries.

It is distinctly a matter of educational and public interest that one of these fine books is now being re-issued at a price that should enormously extend the range of its influence. Mr. Herbert Ponting and his publisher must be congratulated warmly on the popularising of *The Great White South*, unabridged, with all the 176 original illustrations. The price of the first and second editions was thirty shillings. The complete work, one of the most vivid and handsome books of travel ever seen, is now reproduced for seven and sixpence.

In the Long Antarctic Night

We wish to give some reasons why we think this book should be in every school, and should eventually get into the hands of every boy whose blood is stirred by manly adventure.

Mr. Ponting occupied a special position, perhaps somewhat apart, in Captain Scott's expedition to the South Pole. He was the official photographer; but he was much more than that. He had had a wide experience of travel, and was a shrewd and picturesque observer, clever with his pen as well as with his camera, and a practised lecturer. Therefore, during the long winter night of the Polar region, he was most useful in giving information, illustrated talks about his earlier travels to the members of the expedition frozen in on the Terra Nova or camped ashore. Captain Scott himself was enthusiastic in his appreciation of Mr. Ponting's work in this way.

Photographing a Band of Heroes

Also, it was an essential qualification for Mr. Ponting's activity that he should note instinctively whatever was dramatically interesting, that he should observe individual character in the members of the expedition and illustrate it promptly and happily, and that the social life of the little community shut away from the rest of the world should have an unflinching attraction for him. In short, he was the professional observer of all that went on in that most friendly company bent on conquering the Great White South.

Other members of the expedition had their own special duties, in which they were loyally absorbed; Mr. Ponting's duty was to observe the whole band of heroes, and to picture them, at all times and under all circumstances, for the rest of the world who might be interested in their gallant doings.

A Wonderful Panorama

Very thoroughly and skilfully, always with overflowing spirit and good humour, has Mr. Ponting performed this duty of portraiture, and so his book gives, alike by camera and pen, a continuous panorama of what we want to see of the men and their doings throughout that heroic expedition in which human character reached its loftiest level.

Before we finish the book there is scarcely a man in the whole company whom we do not know. Take the boat-swain, Mr. Cheetham, of Hull. Alf was his name among his comrades when off duty. He it was who usually led the sailormen as they sang their chancies, though Lieutenant Bruce had an exten-

sive knowledge of those quaint songs of the sea. Cheetham had probably a more complete knowledge of Polar conditions than any man aboard. "The smell of the ice was as the breath of his nostrils. A hale and hearty soul, his contented spirit was indexed in the smile that almost perpetually illumined his seasoned features."

A Great Human Story

Such thumb-nail sketches of the men of the expedition abound, and the most attractive of them all are those of the three final heroes of the venture who died on their way back from the Pole—the noble-minded Captain Scott, Dr. Wilson, and Captain Oates, that "very gallant gentleman." All that we see of Oates, from first to last, fills in a most consistent picture of a great-souled, modest man. If we must choose the most attractive feature of Mr. Ponting's book it would be the success with which he has introduced us to the men who formed that splendid band of comrades.

Others may tell of scientific results; Mr. Ponting gives the human side of the story, and it is thrilling and touching beyond words, especially when we read how one and another of them came back to give their lives to their country in the Great War. Alf Cheetham, the genial bos'n, for instance, died gallantly mine-sweeping in the North Sea.

Next to the human side of these Polar expeditions is the animal side, the dogs and ponies on board, the whales in the sea, the seals and penguins on the ice and in the waters, and Mr. Ponting gives scores of fine pictures illustrating the habits and humours of these creatures. His chapters on whales and seals are particularly interesting. He declares that in the Antarctic silence he has heard the spouting of a whale seven miles away; and he has seen a huge whale leap clean out of the water.

The Dough that Rang a Bell

The most exciting adventure in the book is Mr. Ponting's own escape, by a hair's-breadth, from some killer whales that combined to attack him and break up the ice when he was photographing near its edge. The best of the domestic stories aboard the ship is that of the cook Clissold, and his device for being called when it was time to bake bread.

Having mixed the dough he placed a small metal disc on the top, and put the dough in a large pan near the galley fire to rise. Then he went to his bunk to rest. When the dough rose to the requisite height the metal disc rose and touched another piece of metal above, and by completing an electric circuit rang a bell close by Clissold's bed. Whereupon he got up and put the batch in the oven.

It is equally a duty and a delight to read such fine histories of adventure by our gallant countrymen as fill this charming volume; and we repeat that it is a national advantage for books like Mr. Ponting's to be brought within reach of a moderate purse. *Pictures on page 3*

X-RAYS IN THE ORCHARD Testing the Fruit

Interesting experiments are going on in South Africa to find an infallible means of detecting defects in fruit.

Sound fruit, when looked at with the X-rays, appears as a patch of equal intensity throughout, while decayed parts or other defects cast easily recognisable shadows on the fluorescent screen.

Whether this method of examining fruit can be applied on a large scale remains to be seen, but it is already proving of great value in studying the progress of decay and its prevention.

IRON BRICKLAYER NEW WAY OF DOING AN OLD THING

How to Put Up Houses Quickly
INVENTOR AND THE BUILDING
PROBLEM

By Our Economic Correspondent

From time to time the C.N. has described many new methods of house-building calculated to lower the cost of houses. Among other things it has given an account of concrete construction, of "pouring-out" houses by the use of moulds, of making improved hollow bricks, and so on.

The call for houses is still urgent, and though the cost of building is much lower than it was it is still very much higher than before the war. It costs about £300 to put up a tiny house with one combined living-room-kitchen and three small bedrooms. Such a house is termed compact, and so it is.

But there is a limit to compactness if a family is to live in comfort, and if the mother is to have reasonable room in which to do her work. It is difficult to do good work of any kind unless there is room to lay things out. A full-sized family in a very small cottage makes many difficult problems.

A False View

What we have to aim at is the production of a small, but not too small, house for a cost of from £200 to £250, and this can only be achieved by great improvements, first in the manufacture of house materials, and second in the methods of house-building.

Unfortunately, many of those engaged in the trade do not welcome new methods, and think that there would be less work if improved ways of working were devised. That is a false view. If houses could be built for £200 the economic demand would become so great that there would be far more employment in the building trade.

Among the latest devices to assist house-building is a bricklaying machine, with the aid of which three men can lay from 1200 to 1500 bricks in an hour.

The Travelling Carriage

This machine is in use in Glasgow, and is made by the firm of Arrol and Company. Rails are laid outside the walls to be built, and upon these travels an upright iron frame. The frame supports a beam, which can be raised as the walls are built.

Upon the beam is mounted a travelling carriage, which can be moved along it. This carriage supports a receptacle for mortar and the bricklaying machine. As the carriage moves along the beam the machine spreads the mortar and lays the bricks. The bricks are fed into a hopper by hand, but the machine does the actual laying.

The bricks are laid, one row at a time, right round the building, and then the height of the beam is raised by the thickness of a brick and a mortar joint, so that another row can be laid.

1500 Bricks an Hour

Let us see what this means in speed. A bricklayer can lay by hand from 500 to 1000 bricks a day, so that three bricklayers (with additional labour to feed them with mortar and bricks) can lay about 2000 bricks in a day. The bricklaying machine can lay up to 1500 bricks in an hour, with the work of only three men.

It is to be supposed that the machine could handle not only ordinary bricks, but improved, larger, hollow bricks.

Inventors may also usefully turn their attention to brickmaking where it is highly necessary for costs to be reduced. At the present moment we are told there is a famine in bricks, yet there is not nearly enough building going on.

THE WEEK IN GEOGRAPHY

THE GOODWIN SANDS

A PERIL AT SEA THAT MAY BE A BLESSING ON LAND

A scheme by which the dangerous Goodwin Sands off the coast of Kent may be reclaimed once more to the mainland of England is now being discussed, and one suggestion is that this scheme should be linked up with the Channel Tunnel scheme, and the enormous quantity of material dug out for the tunnel be dumped on the sands.

Such a plan would serve the double purpose of getting rid of the excavated matter and of adding to the area of the country. It sounds attractive, but whether the engineers will consider it a practicable and paying proposition remains to be seen.

A Corner of Kent

The Goodwin Sands are really a little corner of Kent which was cut off by the sea more than eight hundred years ago. When the Conqueror came to England, so the old chronicles tell us, there was a low-lying but fertile area in this part of the country belonging to Earl Godwin, the father of King Harold; but William of Normandy confiscated the estate and bestowed it upon the Abbey of St. Augustine in Kent.

Instead of using the revenues of the estate to maintain the sea-wall in good condition and to support the abbey, the abbot used the money in building Tenterden steeple. The result was that the sea-wall became more or less of a ruin, and in 1099 the waves rushed in and overwhelmed the whole estate, all that remained being the Goodwin Sands, so named after the earl. There is an old saying that Tenterden steeple was the cause of Goodwin Sands.

They are ten miles long, and their distance from the mainland varies from three to seven miles. At high water they are covered, but at low water they are generally exposed, and parties have landed from time to time and played games of cricket and football there.

Clay Under the Sand

That they really are a remnant of the land and not a mere accumulation of drifting sands was proved by the Trinity Board engineers in 1817, when they made borings and found that 15 feet of sand rested on a bed of blue clay.

In 1014, it is said, there had been an inrush of the sea which should have acted as a warning, but the sudden inundation of 1099 was fatal, and ever since this little bit of old England has been under water, and not only useless but dangerous. If it could be reclaimed and added to Kent it would, indeed, be a splendid piece of work.

Florence of Worcester, in his Chronicle, says: "On the third day of the nones of November, 1099, the sea came out upon the shore and buried towns and men very many, and oxen and sheep innumerable." Geologists, however, are inclined to think that the cutting off of the Goodwin Sands from the mainland must have taken place earlier.

Lifeboatmen See a Mirage

Mirages are not uncommon on the Goodwins, and some time ago the C.N. told how the Deal lifeboat went out to the rescue of a large vessel that was seen stranded on the sands, and when the place was reached, lo! the great ship was gone and there was nothing to be seen on the sands but a few seals and gulls. The vessel had been a mere phantom conjured up by the mirage.

This is not the first time a scheme has been proposed for utilising the Goodwins. In 1841 a suggestion was made that a harbour of refuge should be formed by building round the deep inlet between the North and South Goodwins, known as Trinity Bay, a massive stone wall.

Quite recently the Goodwins have won fresh notoriety. For the first time these sands, the scene of so many shipwrecks, have had a passenger aeroplane wrecked upon them; and it is stated that at the present time they are being much used as a haunt by smugglers.

PINEAPPLES ON PAPER

New Way of Smothering Weeds

INTERESTING EXPERIMENT IN HAWAII

In tropical and semi-tropical countries, where Nature is so prolific, the problem of weeds is a serious one.

Often the weeds grow so rapidly that they choke the crop that is being raised by man, and the labour of weeding is not only constant but costly.

In Hawaii a new way of fighting the weeds has been discovered by the growers of pineapples, and is proving very successful.

Hawaiian pineapples are the best in the world, and any diminution of the crop is a serious matter. On the other hand, any increase in the crop means extended profits for the growers.

It has been found that by covering the rows of growing pineapples with long strips of paper the weeds are prevented from flourishing, while the pineapples become bigger and finer still.

This improvement is due to two causes. In the first place, the paper kills the weeds, and the nourishment they would absorb from the soil is thus made available for the pineapples; and in the second place, by protecting the soil from the hot sun, much moisture is conserved, and this also benefits the growing fruit.

The paper used is made from the waste fibre of the sugar-cane, which was formerly of no value. Seventy-five thousand rolls of the paper are used in a year, at a cost of about £40,000, but the pineapple output is increased by half.

HAPPY WORKERS BEST

A Great Firm's Good Record

All good employers now hold that the best work can only be done by healthy and happy human beings, and "welfare work" among workers is spreading everywhere.

The most powerful industrial firm in the world is probably the United States Steel Corporation.

It is the great combine, or trust, which controls more than one-half the iron and steel works of the United States. Its undertaking is more extensive than that of all the iron and steel works of Great Britain put together. So excellent are its provisions for the welfare of its workers that some of the facts about it seem very startling.

The firm has 321 doctors, 293 nurses, and 125 safety inspectors. It has established 175 playgrounds, 125 athletic grounds, 109 tennis courts, and 27 swimming ponds. Also, it has built 25 churches, 43 schools, 60 restaurants, 34 clubs, and 275 rest rooms. Over nine million dollars have been lent to the firm's employees to help them to buy their houses.

In addition every effort has been made to induce the employees to become shareholders, and so to share in the profits of their work.

WIRELESS ON THE SEA

A Few Defaulting Nations

All British ships are required to carry wireless, and in 1914 an international system of wireless control for saving life at sea was agreed on.

Unfortunately, some nations have even now failed to comply with the regulations made by the international committee nine years ago, so a great deal of the value of wireless as a life-saver has been wasted.

An automatic device and alarm signal is now being perfected which the committee declares is urgently needed.

It is very important that this should be adopted by all the nations, but meanwhile international wireless is held back by the obstinacy or ignorance or selfishness of a few.

C.N. QUESTION BOX

All questions must be asked on postcards; one question on each card, with name and address. The Editor regrets that it is not possible to answer all the questions sent in.

What Does C.I.D. Stand for?

The Criminal Investigation Department, a branch of Scotland Yard.

When Did Socrates Live?

He was born about 470 B.C., and died by drinking hemlock according to the sentence of his judges in 399 B.C.

What is Margarine?

A substitute for butter made of animal and vegetable fats and oils mixed with milk. Good margarine is, according to doctors, almost as nutritious as butter.

Are Wasps Useful?

Though they eat a good deal of fruit in autumn, and are often a nuisance, yet they do much good by destroying large numbers of flies and other harmful insects.

What is the Nectar of Flowers?

It is a sweet substance produced by the glands of a flower for the purpose of attracting the insects which pollinate the flower.

How Many Miles of Route Have Each of the Four Groups of British Railways?

London, Midland, and Scottish, 7464 miles; London and North Eastern, 6464 miles; Great Western, 3765 miles; Southern, 2129 miles.

What is a Light Year?

The distance light can travel in a year. As it travels about 186,000 miles a second a light-year is equal to 5,876,068,880,000 miles—an inconceivable distance.

Are there Such Things as White Swallows and Blackbirds?

Yes; among all creatures at times are born freaks that are destitute of natural pigment or colouring matter and are therefore white. These are called albinos.

What is Black Isle?

Black Isle is a peninsula between the Beaulieu and Moray Firths and the Firth of Cromarty, and includes parts of Cromarty, Ross, and Nairn shires. The Black Isle branch of the Highland Railway was opened in 1894.

How Long Can a Person Exist Without Food, but with Water?

Terence MacSwiney, the arrested Lord Mayor of Cork, who went on hunger-strike in Brixton gaol, is said to have gone without food for 73 days. A number of professional fasters have lived on water only for 40 days.

What is Black-Damp?

It is another name for choke-damp, and is carbon dioxide gas, given off by the coal. Fire-damp, known also as marsh gas, is a variable gas given off by the coal, and consists mostly of light carburetted hydrogen, generally mixed with other gases, such as oxygen, nitrogen, and carbon dioxide.

How Long Should a Bowling Green Be?

There is no rigid rule, but a space 42 yards square is generally divided into six rinks, or playing spaces, not less than 19 feet or more than 21 feet wide. The jack must be thrown at least 25 yards from the mat on which the bowler stands.

Why Can a Cat See in the Dark?

Neither a cat nor any other animal can see in absolute darkness, but a cat's eye is so made that in dim lights and in almost total darkness the pupil expands very much, so that all the light possible can enter and the cat can see when we cannot. Our eyes do the same thing, only not to the same extent.

What is a Bunsen Burner?

A Bunsen burner, named after its inventor, Professor Bunsen, of Heidelberg, is a burner which has one or two holes through which air can enter and mix with the coal gas. A more perfect combustion of the gas, and therefore greater heat, is secured by allowing air to mix with the gas, and this is the principle in our gas stoves and rings.

Are the Decimal and Metric Systems the Same?

They are often used as interchangeable terms, but whereas the decimal system of weights and measures is a system based on rising by tens, it is not necessarily the metric system, which is a decimal system with an arbitrary unit, the metre, 39.37 inches, as its basis. A decimal system could be based on the foot or yard.

Why Are there Two Tides a Day?

The Moon not only attracts the sea on the side of the Earth next to it, but it also attracts the Earth itself. When, therefore, we are on the side next to the Moon the sea is drawn up by the Moon, giving us high tide, and the Earth is drawn away from the water on the other side of the world, causing high tide there. When we have high tide it is always high tide on the other side of the world, and so every place has two tides a day, one when the Moon is nearest to it and one when the Moon is farthest away.

A WORLD BEYOND OUR SYSTEM

STAR'S CHANGING LIGHT

Dark Globe that Partly Eclipses a Bright Sun

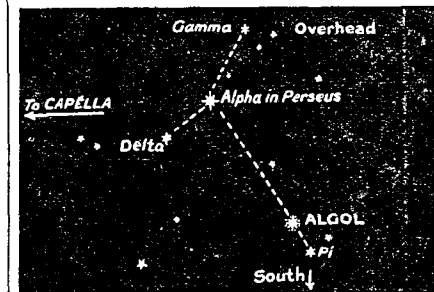
THE WAXING AND WANING OF ALGOL

By Our Astronomical Correspondent

That there are other worlds far beyond our solar system, worlds that revolve round distant stars, has long been known.

That there are worlds enormously greater than our own, and millions of them, is also beyond a doubt. They reveal their existence in various ways, but as a rule it is only by very close and prolonged study of the stars—their suns—through the telescope and spectro-scope, that their presence is made known. But there is one that reveals its existence to the naked eye, and next week two opportunities of observing it will occur.

It is through the fluctuation in the light of the famous star Algol that this great far-off world has become known to



Where to find Algol

us, and by the simple process of partially interposing its immense dark globe between us and the sun Algol, around which it is continuously revolving.

To find Algol is easy, for it is normally a bright, second-magnitude star, about as bright as the chief stars in the Plough.

It is in the constellation of Perseus, which is found high up, toward the east, about 8 p.m., and not far from overhead.

If the observer stands facing due south, Algol will be found to the left of overhead at 10 p.m., and a little to the south of overhead by 12 p.m.

The night of Monday next, November 5, will provide the first convenient opportunity for seeing this stellar eclipse in the early evening, before 6 p.m., when Algol is rather low in the north-east. Then it will be seen to be almost as bright as Alpha in Perseus; but soon after Algol will be seen to be getting fainter, and by 9 o'clock it will not be nearly so bright as Alpha. By 10 o'clock it will be down to almost fourth magnitude, having lost five-sixths of its light. Soon after it will begin to brighten up, and in about 3½ hours it will be back to its normal brilliance.

Loss of Brilliance

It takes nearly four and a half hours to decline in brightness, and remains about twenty minutes at a minimum, during which time only one-sixth of this far-off sun Algol is shining upon us.

Actually this event took place 84 years ago, and the diminution of Algol's light has taken all this time to reach us.

After an interval of nearly three days, that is, on November 8, at about 7 p.m., Algol will be again almost obscured by this great, dark world, and at a minimum. In this short space of time—2 days 20 hours and 49 minutes—that dark planetary globe has whirled round Algol and come between us and his radiance again.

It must have a very hot time of it now, if it is only 3½ million miles from Algol, as has been calculated, for the great astral sun is much hotter than ours and radiates nearly a hundred times the light, and this colossal dark world appears to be a globe large enough to contain 1,200,000 Earths. G. F. M.

Other Worlds. Mars is the only planet now visible to the naked eye, and can be seen in the east after 4.30 a.m.

THE ROGUE WHALE

A Thrilling Story of
Two Boys at Sea

Told by T. C. Bridges
the C.N. Storyteller

What has Happened Before

Kit and Colin Kemp, twin brothers, save Cecil Carton from a disabled motor launch caught in a squall.

Cecil's father, a millionaire ship-owner, asks the twins how he can show his gratitude, and they suggest that he might find work for their uncle, Captain Nat Sibley, who has lost his ship and his master's certificate.

Mr. Carton sends Captain Sibley and Kit and Colin on a whaler to the Indian Ocean. Their object is to kill the rogue whale which sank a yacht and drowned Mr. Carton's daughter.

The whaler picks up a small boat containing two unconscious men. Captain Sibley recognises one as Simon Blaskett, the mate who was responsible for the wreck through which he lost his certificate.

CHAPTER 7

"There She Blows!"

THE twins were impatient to know more.

"But how does Blaskett come here?" demanded Col.

"We shall know soon enough," replied Captain Nat, speaking in the same harsh, unnatural voice. Neither of his nephews had ever seen him so strongly moved.

Mr. Crale meantime was putting water to Blaskett's lips. The man snatched at the mug and drained it. "More," he said thickly.

"That's enough for the present," Mr. Crale told him. "You'll kill yourself if you take too much."

Blaskett scowled at the other, and Col shrugged his shoulders. "Sweet creature," he remarked.

Captain Nat had not moved. Blaskett had not yet seen him at all. Mr. Crale was speaking to Blaskett.

"What is your ship?" he asked.

"What was my ship you'd better say, mister," replied Blaskett in his harsh, unpleasant voice. "I was second mate of the Dundee until that mad whale sunk her."

Col started forward, but his uncle's big hand caught and held him. Mr. Crale was gazing at Blaskett with eyes full of horror. "What, another?" he asked hoarsely.

"I don't know about another," said Blaskett. "But by the way that all-fired brute charged us, I'd think it wasn't the first time he'd done the trick. He was a bull whale, the biggest I ever set eyes on. Must have been all of eighty feet long, and his lower jaw crooked like a crossbill."

"The same," replied Mr. Crale, in a low, thick tone. "The same that sunk us in the Mercy, and that stove the Portland." He paused. "And you are the only survivors?"

"Two boats got clear," Blaskett told him, "but the big bull finished the other. Looked to me as if he bit it clean in two. It was only because he was so busy with it that we got clear. But we'd no grub and only one keg of water, and we've been afloat eight days."

Kit shuddered. The thought of what these unfortunate men must have suffered was ghastly.

"Give me some more water," demanded Blaskett, "and a drop of rum in it wouldn't go amiss."

"You had better be taken below," said Mr. Crale. "Then you shall have something else. But bread-and-milk will do you more good than spirits."

Blaskett scowled again. "I reckon I know what's good for me," he snarled. But Mr. Crale took no notice.

As two men picked Blaskett up Captain Nat slipped aside behind the deck-house.

"I will wait till he is better before I tackle him," he said signi-

ficantly. "But if he thinks that he is going to remain upon this ship he is mistaken."

"What will you do with him, Uncle?" questioned Col. "Will you maroon him?"

Captain Nat's grim face relaxed into a smile.

"We don't do things like that nowadays, Col. I shall wait until we run into some port in Madagascar or Mauritius. There he will go straight ashore."

Blaskett and the other survivor from the Portland were carried below, and the Portland's boat was hauled up on deck; then Captain Nat spoke to Mr. Crale, and orders were given for the burial of the three dead bodies. Captain Nat himself read the service and the crew stood by in silence.

The boys listened with bared heads and hearts full of pity for the three poor fellows who had come to such a terrible end. When all was over Mr. Crale turned to Captain Nat.

"That's one more to the score," he said, and there was a strange light in his eyes. "We've got to get him, Captain Sibley."

"Never fear, Mr. Crale," responded Captain Nat. "We shall get the brute."

The words were hardly out of his mouth before there came a prolonged hail from the crow's nest.

"There she blows!"

CHAPTER 8

A Lone Whale

CAPTAIN NAT looked up.

"Where away?" he shouted.

"On the lee beam. A big lone whale, about five miles off."

Kit, standing close by Mr. Crale, saw that queer gleam come again into his sunken eyes.

"The rogue," said Mr. Crale breathlessly.

But Captain Nat shook his head. "Don't be too sure. I'm not thinking we'll find him as easy as that." Then he turned and shouted out orders.

The ship was kept off, and at a steady pace approached the spot where the whale had been seen to blow. So far, though she had been at sea for nearly three months, not one whale had been sighted, and now the excitement on board was tremendous. A whaling crew, down to the youngest lad aboard, work on shares, and it is to the interest of all to kill as many whales as possible.

Though the great days of whaling are past, of late there has been a revival of the industry, and both oil and spermaceti find a ready market.

When about two miles from the place where the whale had been last seen the boats were lowered. For weeks past the men had been drilled in their task, and now the activity with which they sprang barefooted to their places was wonderful. Mr. Crale took one boat, and of this the twins formed a part of the crew.

Young as they were the boys could handle the long oars with the best, and dropping them into the well-matted rowlocks they fell instantly into stroke.

Four boats were put down and rowed out in fan shape, so that at two miles from the ship they covered a front of a mile and a half. Each boat was thirty feet long, sharp at bow and stern, six and a half wide amidships, and with a bottom so round and buoyant that it rode the swells like a duck.

Each was equipped with 380 fathoms of two inch line, five harpoons, three lances, a hatchet, and a sharp knife. Each had a water keg, a case of biscuits, a lantern, a first-aid case, and was fitted with mast and sail. The boat was worked with four oars and steered with an oar 22 feet long, run

through a grommet on the stern port. "Easy now," said Mr. Crale in a low voice, and they stopped pulling while Mr. Crale, standing up, scanned the silken swells on which they were swinging.

"Full time for ole whale to come up," murmured Jupe, the big mulatto, and almost as he spoke Kit's sharp eyes caught a darkness under the clear water barely a cable length ahead.

"There!" he whispered sharply, and pointed.

"Jimmy, but it's him!" muttered Jupe, and at that instant the sea broke and a huge mass, looking as if modelled out of india-rubber, rose to the surface, and a jet of vapour rushed up into the clear air.

"Spring! Spring!" snapped Mr. Crale. In a flash he was a new man. His very face had changed, and his eyes flashed with fierce excitement.

How they pulled! Yet they did not forget that a whale is one of the most easily frightened of all sea creatures. The oars dipped noiselessly, feathered perfectly, and in dead silence the boat flashed upon the giant beast.

The two boys were so excited that they could hardly breathe. Having their backs to the whale, they could not, of course, see what was happening. Then all of a sudden they both smelled an odour like a great bank of seaweed, and right under the blade of his fourteen-foot oar Kit saw a wide blackness, and realised with a gasp that it was the flukes of the giant whale.

"Now!" roared Mr. Crale; but Jupe hardly waited for the order.

"Take dat!" he shouted at the pitch of his tremendous voice, as he flung the razor-bladed harpoon with such force that it sank a good three feet into the black, shining mass.

"Stern! Stern all!" bellowed Mr. Crale.

The next thing the boys were conscious of was a report like that of a six-inch gun and a deluge of foam as the whale's huge flukes struck the water almost alongside the boat. Then the boat spun dizzily as it swung to the tow-line, and next moment was flying across the sea at a furious speed.

As usual the creature ran to windward, and at such a pace that the boat literally shot from one wave crest to the next, striking each in succession with a sound like a pistol shot. The air whistled past their ears as if a gale were blowing.

Col was the first to get his breath back.

"Mr. Crale," he called out—"Mr. Crale, is it the rogue?"

Mr. Crale shook his head. "No," he said,—"no. It is not the rogue."

CHAPTER 9

Danger

ON and on went the whale with undiminished speed, towing the boat behind him as easily as if it had been a chip. Within a very few minutes they had passed the Triton, crossing her bows about a mile ahead of her.

"Will she follow us?" asked Kit. "She's got to pick up the other boats first," Mr. Crale told him.

Kit said nothing, but it occurred to him that at the pace they were travelling they would get a long start before the Triton could follow them up.

This idea, too, was evidently in Mr. Crale's mind, for presently he ordered them to try to pull up on the whale so that Jupe might lance it. But, though they hauled till they were breathless, they could hardly gain a yard.

"How long will he go like this, Jupe?" asked Col of the harpooner.

"All de day and all de night by de look ob him," growled Jupe. "I done put the iron too far back. It ain't hurting him no more'n a skeeter bite, and he'll run till he gets tired."

"Unless he stops and mills," put in Mr. Crale.

"Ah wish he would," said Jupe. "De breeze is getting up, and we's in fer a wet ride."

He was right; and as the breeze freshened the spray broke over the boat so heavily that it was like a blinding mist. Often they were unable to see the whale, which still travelled at the same mad speed.

"Mr. Crale's looking worried," said Col in his brother's ear.

"I don't blame him," replied Kit. "There's weather brewing. What's more, it will be dark in little more than an hour."

With startling suddenness the strain ceased, and, though the boat still moved forward, her pace rapidly slackened.

"Back her! Back her!" ordered Mr. Crale, and the crew obeyed.

When her way was quite stopped and she floated motionless on the heaving swells, the boys had time to look round.

"Why, the whale has gone!" gasped Col in dismay.

"He's done sounded," explained Jupe. "Jest dived down deep to see if he can't fool us."

But he didn't stay down long. A minute later up shot the whale again, bouncing to the surface a hundred yards or more ahead of the boat.

"Plumb out o' reach!" growled Jupe, as the great black monster set off again at the same mad speed.

The breeze kept on stiffening, and a quantity of hard-edged clouds was showing in the south-east. Mr. Crale, who was now looking really worried, whispered something to Jupe. But the big mulatto shook his head.

"No, sah, I wouldn't do dat," he said. "He can't keep dis up very much farder. Ah reckon he's nigh due to run deep or start a-milling."

But the whale did not do either. He kept on, and now every wave was splashing inboard, and the crew had to bale hard. The Sun was hidden by clouds, the sea had darkened; and, as for the Triton, she had completely vanished.

Kit now knew that what Mr. Crale had suggested was to cut, but he was well aware how unwilling either he or any of the men would be to lose such a prize. For a whale such as this to which they were fast would yield oil and spermaceti worth at least £500.

More water came splashing aboard, and Kit and Col were baling hard when they became aware that the furious pace had suddenly slackened.

"Watch out!" roared Jupe in hurricane tones. "He's turned. He's going to mill."

Kit looked up, and saw the huge brute coming straight for the boat. His mouth was wide and the gap between the two jaws was wide enough to swallow the boat and everything in it.

TO BE CONTINUED

Five-Minute Story

A Slice of Cake

EVEN Jock could tell that that poor, lean dog was nobody's dog. It had wistful eyes, and the thinnest body.

Jock and Mary had their baskets in their hands, for they were off nutting to Wilbury Woods. Wasn't that just the nicest sort of holiday? Mother gave them each a big slice of cake to eat as they went along, and everybody knows how good cake tastes out of doors on a cold October morning.

Mary had finished her cake first—that was because Jock had been talking so hard about where the best nuts grew. He had just started nibbling the brown crisp top off his cake when he saw the dog. And somehow he couldn't take another bite. Mary had run on to pick a fat blackberry. Jock didn't trouble to race her; he stood and very slowly stretched out his hand.

The hungry dog didn't waste any time. He gave a snatch, a gulp—and the cake was gone.

"To think of your giving Mum's best cake to a tramp dog!" scolded Mary, who had turned just in time to see the cake disappear.

Jock walked on.

"It was the hungriest dog I ever saw," he said.

Then he told Mary he would race her to the woods. Jock won, but Mary didn't mind. She had found the first nut!

"That tramp dog's following," said Mary. "I expect he thinks you're made of cake. He won't say thank you for nuts."

Jock chuckled.

"My basket's fuller than yours," he replied. "And I think that dog's all right. He's a friend to me."

"Cupboard, love," mocked Mary. "Oh, look!"

Jock did look. You never saw such nuts as grew on that tree. Mary was up among the branches of another one, but she began to scramble. Jock scrambled too. Those brown nuts were quite a sight, and he could easily reach if he stretched.

Jock was looking down. His foot slipped, and it was only then that he saw the hazel tree was hanging over a precipice, a deep precipice with a pool far below. Jock tried to draw back, but it was too late. He was slipping—slipping—slipping. He heard Mary scream, and the rush of falling soil. Then something snapped at his coat. He was being dragged back, dragged back to safety from the very edge of that pit.

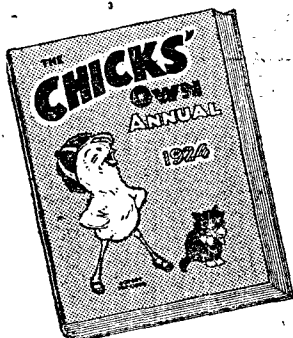
Flop! Jock and the hungry dog fell on the grass together, with Mary trying to hug them both as she sobbed over them.

For it was the hungry dog that had saved Jock's life.

But he is no longer a hungry dog; and Jock and he love each other faithfully.

"I don't wonder, either," says Mary. "And all owing to a slice of cake." But perhaps it was something more!

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Let Young and Old Come Forth to Play



DI MERRYMAN

A PESSIMIST met a friend who was an optimist.

"I cannot understand why you are always so cheerful," said the pessimist. "I thought you had much to worry you."

"So I have," replied the optimistic one, "but I never worry, because during the day I am far too busy, and at night I am far too sleepy."

A Riddle in Rhyme

MY first is in foolish and also in wise,
My second's in eyeglass and also in eyes,
My third is in matter and also in mind,
My fourth is in peevish and also in pined,
My fifth is in atlas and also in map,
My sixth is in rattle and also in tap,
My seventh's in thoughtful and also in think,
My eighth is in blacking and also in ink,
My ninth is in windows and also in sill,
My tenth is in paying and also in bill,
My eleventh's in finger and also in hand,
My twelfth is in gorgeous and also in grand,
My whole is an adjective true of each one
Who is rightly fulfilling his place in the Sun.

Answer next week

A Useful Animal

A PARTY of poor children who lived in a large town were taken for a trip into the country, and during the day they were shown over a farm. When they had seen all the wonders of the dairy, the kindly farmer gave them a drink of fresh milk.

As one little girl put her glass down she gave a sigh of satisfaction, and said:

"Oh, that was fine! I wish our milkman kept a cow!"

The Ridiculous Calendar



The Scalliwag

YOU find few animals about
When snow and cold begin;
And as the year starts running out,
The beasts start running in.
The scalliwags are chilly souls,
And every year remember
To hurry, howling, to their holes
As soon as it's November.

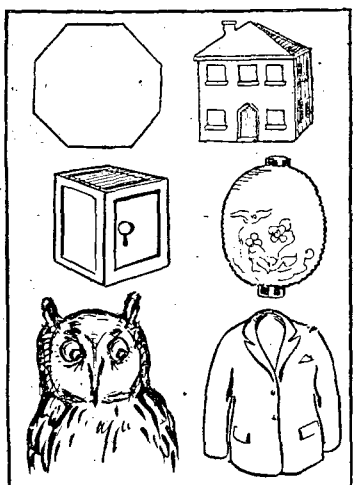


The Chinkie

THE Chinkies, also, start to run,
For cold winds always skin them;
They live near houses (though no one
In Nowhere Land lives in them).
They always wait till the first blast
Sweeps over them, and passes;
Then they dig tunnels mighty fast,
And snuggle 'neath the grasses.

WHAT is the difference between the busy bees and a stupid donkey? The bees make the wax and the donkey gets the whacks.

A Hidden Word Puzzle



When placed in their correct order the initial letters of each of these six pictures will spell the name of a place we have all been to. Can you find it?

Solution next week

WHY is a railway time-table very much like human life?
Because it has many ups and downs.

Do You Live at Hornsey?

HORNSEY as a place name is really a corruption of Harringay. The hard g in Harringay was first softened into Harnjy, and eventually the name came to be spelt Hornsea, and then Hornsey to fit the changed pronunciation. Harringay is simply Harring's ge, or region, Harring being the name of some unknown person, probably a chief or leader.

Hornsea in Yorkshire, however, has a different origin. It was formerly spelt Hornesse, and means the isle or peninsula of Horn, a Danish Viking of the ninth century.

Changing the Initial

I AM a wild animal.
Change my initial and I mean to rip;
Change again, and I am the name of a king;
Change again, and I am a fruit;
Again, and I am a period of time;
Again, and I am the back;
Again, and I mean terror;
Again, and I am sweet;
Again, and I am not far.

Answer next week

WHY is the letter t like an island?
Because it is in the middle of water.

Force of Habit

A GENTLEMAN approached the clerk in the vestibule of a hotel and said:

"Will you tell me, please, if there is a gentleman named James Robinson staying at this hotel?"

The clerk, who had until recently been a shop assistant, looked through the list of guests and replied:

"I'm afraid not, sir; but we have something just as good."

ANSWERS TO LAST WEEK'S PUZZLES

A Puzzle in Rhyme

Care-less

What Am I? Passage

The Boy in the Garden

The boy said I C A B (I see a bee), and his sister replied U R Y Y C C B B (You are too wise to seize bees).

Who Was He?

The Great Duke was Wellington

Jacko Keeps Shop

WHEN Jacko heard that his old friend the coffee-stall man was ill, he went straight off to his home to ask what he could do for him.

"Bless you!" said the coffee-stall man; "there's nothing I want. I'm right enough. I'll be out again in a day or two."

"But what about the stall?" asked Jacko.

"Oh, that'll have to take care of itself!" said his friend.

Jacko thought a bit.

"I wish I could run it for you," he said. "I believe I could."

"Not you," said the man. "Nice hash you'd make of it. You get off to school; that's your job."

But Jacko wasn't very keen on school that morning. He went off, but, instead of taking the lane that led to the school-house, he went round to the yard where the stall was kept.

It was a simple little affair on four wheels, very light and easy to move about. Jacko stood looking at it for some minutes, and at last he made up his mind.

"I'll do it," he murmured to himself. "If I can't run that little show I'll eat my hat. My word!" he added, going up behind and giving it a shove, "he'll be jolly pleased when I take him all the money I'm going to make."

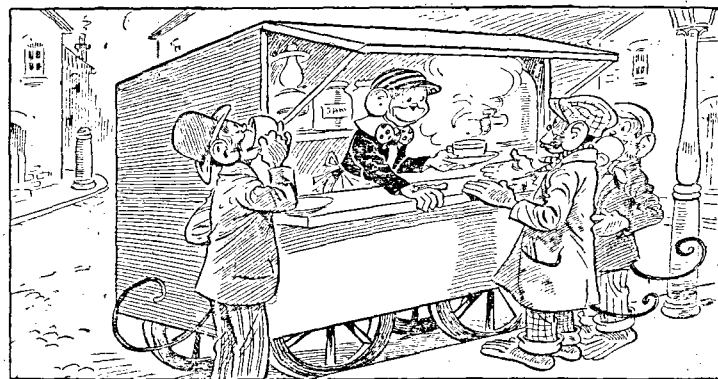
He pushed the little shop out into the road, and wheeled it along to the familiar spot at the corner of the High Street where it always stood.

As it happened, Jacko found keeping shop a very easy job that day. There was a good supply of everything to his hand, including an urn full of coffee, ready made, which only needed to be heated.

It didn't take long to arrange the things and to set light to the lamp under the urn.

"Coo!" murmured Jacko. "Why did I never think of this before? It's the best game in the world!"

It certainly was fun. He had no lack of customers that morning, for it was a coldish day with a decided nip in the



Jacko had no lack of customers

air, and the demand for hot coffee was brisk. By dinner-time he had taken five shillings. He locked the money carefully in the little till, put the key in his pocket, shut up shop, and scampered home.

He was in such a hurry to get back again that he was content with one helping of pudding, which made his mother quite anxious about him.

"Are you feeling well, dear?" she asked.

Jacko grinned, and made the amazing statement that he didn't feel particularly hungry. Then he disappeared.

But when he got back to the coffee stall he had an unpleasant shock. The till, which he had carefully shut and locked, had been forced open, and the money was gone.

"That's a nasty one!" muttered Jacko. "Suppose I oughtn't to have left it there. Never mind," he added, cheering up. "If it hadn't been for me there would have been no five shillings to lose. I'll make that good before I'm finished."

But Master Jacko was to have a few more shocks before that time came.

The paragraph on the right is a French translation of the paragraph on the left

A Tame Cuckoo

A Bristol lady sends this story.

Standing in our garden I found two wagtails flying over my head in an excited manner, and on looking on the ground I found a young cuckoo quite near me.

I took it up and placed it in the shrubs, and there the wagtails came and fed it.

It is very tame, and will let us catch it at any time.

Un Coucou Apprivoisé

Une dame de Bristol nous envoie cette histoire.

Me trouvant au jardin, je remarquai deux bergeronnettes qui volaient au-dessus de ma tête avec agitation, et en regardant à terre je découvris un jeune coucou tout près de moi.

Je le ramassai et le plaçai dans les buissons et là les bergeronnettes lui apportèrent sa nourriture.

Il est tout à fait apprivoisé, et se laisse prendre à tout moment.

Tales Before Bedtime

The Flower Show

WHEN Monica heard about the flower show she was very excited, for was there not in her own little garden the most beautiful white carnation there had ever been?

"I'll make it into a buttonhole," she said, "and it will be lovelier than all the other buttonholes."

It really was a lovely carnation. Daddy, who knew all about carnations, had given her the plant, and she had watched it every day till the little tight green bud began to split. It would be at its best in time for the flower show, and she would beg a piece of maidenhair fern from Bates, the gardener, and put a piece of silver paper round the stems, just like all the other buttonholes she had seen last year.

And every morning the flower opened a little more, till on the morning of the show it was the most beautiful carnation that Monica had ever seen.

What an exciting morning it was, too! Daddy was showing all sorts of fruits and vegetables, and he and the gardener were ever so busy getting them ready—so busy, in fact, that Monica couldn't get any help at all with her buttonhole.

For Daddy and Bates were very worried. They had grown twelve perfect carnations specially for the flower show, and just as they were getting them ready Daddy had dropped a beautiful white one and Bates had stepped back on to it.

"There's not another to touch it!" Daddy was saying when Monica ran up; and Bates, scratching his head ruefully and gazing down the carnation border, had to own it was true.

Daddy was terribly disappointed because he was every bit as excited about the flower show as Monica, and he was prouder of his carnations than of anything else in the garden.

Then Monica forgot all about her buttonhole. She scampered



Daddy was surprised

back to her garden, and picked her lovely white flower.

Daddy was surprised when she gave it to him. He had forgotten about Monica's garden.

And when he got the first prize for his carnations Monica was as pleased as he was. She did not say a word about her buttonhole, but perhaps Daddy guessed, for he certainly gave her half the prize.

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CHILDREN'S NEWSPAPER

November 3, 1923

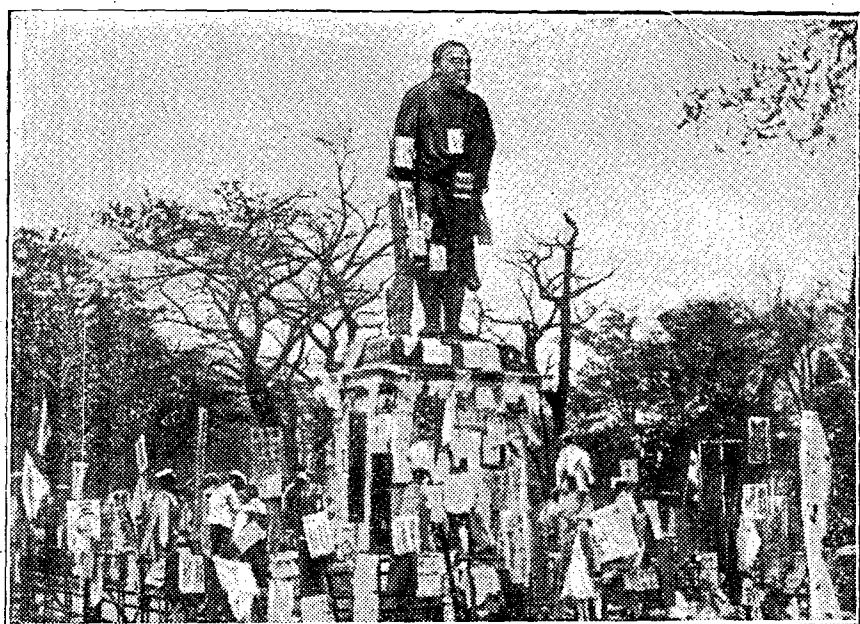
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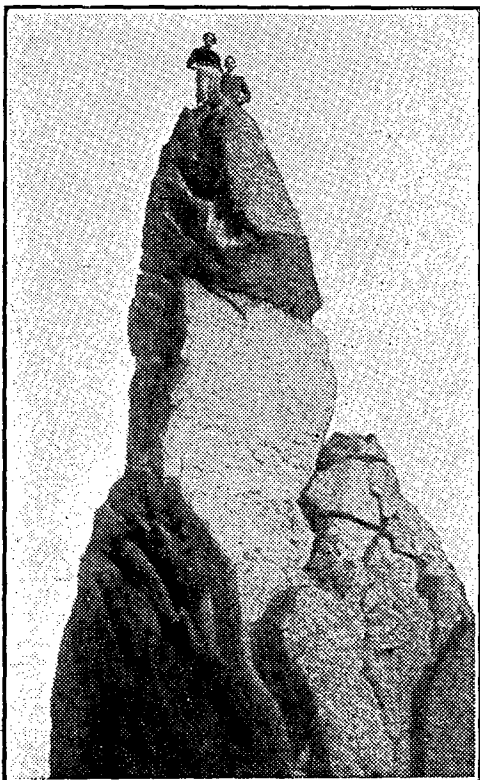
HOUSE LOST IN THE SEA · PETROL SHUNTING ENGINE · THE ELECTRIC BARGE



House Swallowed Up by the Sea—These children are playing on the ruins of what was once a house at Crosby, Lancashire, but was washed away by the sea in the recent great storms



How the Japanese Find Their Lost Friends—A monument in the middle of Tokio on which are placed notices by refugee victims of the earthquake, telling their friends of their whereabouts



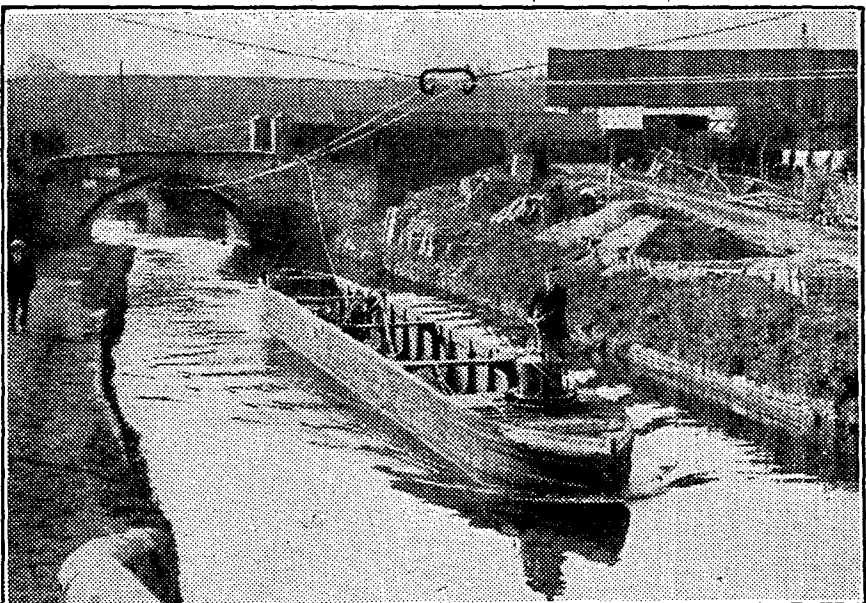
Britain's New Playground—Successful climbers on Napes Needle looking down on the 1500 acres of scenery presented to the nation as a war memorial by the Fell and Rock Climbing Club. See page 7



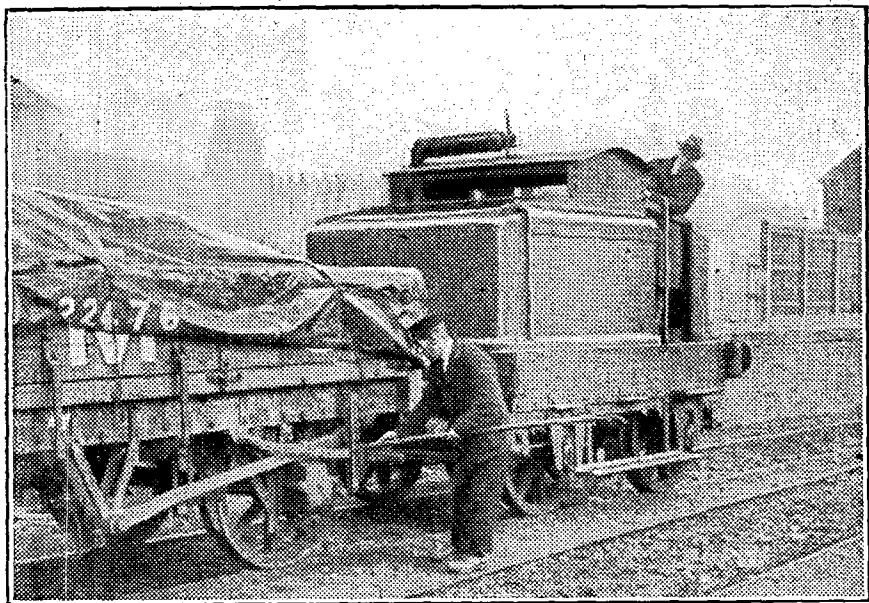
The Palm Goes Home for the Winter—Removing a big palm-tree which has passed the summer in the open air in Regent's Park, and is being taken by a horse and cart to a hothouse, where it will spend the coming winter months. Only in this way can these semi-tropical trees be kept from perishing



A Shower Bath for Nelson's Lions—One of the lions at the foot of the Nelson Column, in Trafalgar Square, London, having its periodical shower bath. This has been found the simplest method of cleaning



Electric Traction on the Canal—An electric barge travelling at four miles an hour by the overhead trolley system on the Staffordshire and Worcestershire Canal at Kidderminster



Motor Engine for Shunting—The latest method of shunting is by the small petrol engine shown in this picture, which was taken at Brentwood, in Essex. It does the work of four horses

ALL THE WORLD LOVES THE C.N. MONTHLY. ASK FOR MY MAGAZINE. EDITED BY ARTHUR MEE

The Children's Newspaper is printed and published every Thursday by the proprietors, the Amalgamated Press (1922), Ltd.; The Fleetway House, Farringdon St., London, E.C.4. It is registered as a newspaper and for transmission by Canadian post. It can be ordered (with My Magazine) from these agents: Canada, Imperial News Co. (Canada), Ltd.; Australasia, Gordon and Gotch; South Africa, Central News Agency; India, A. H. Wheeler and Co.

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